CURRENT NOTES

Helping Atari Owners Through the World of Computing

Vol. 15, No. 2

Mar/Apr 1995

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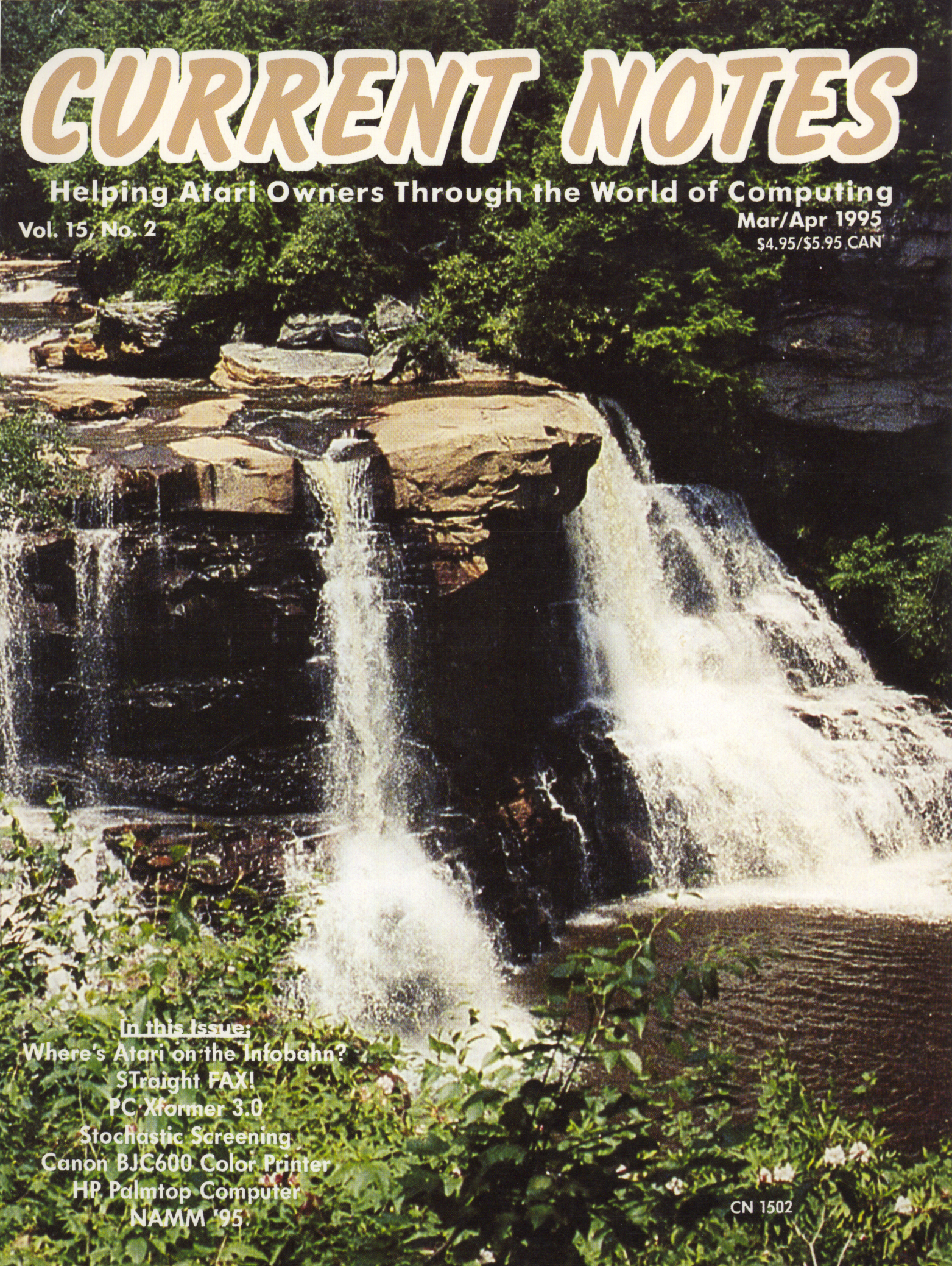

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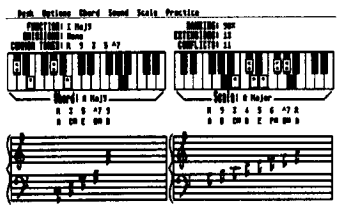
Don't settle for a poor IMITATION - insist on the ORIGINAL RAM Gizmo!

PIANISTICS



Pianistics is an innovative piano instruction program for all levels of students, as well as for seasoned professionals. It was designed as a tool to help keyboardists learn chords and scales in all keys and to give insight into the concepts of scale improvisation and chord substitution. Pianistics is an easy to use GEM application for the Atari ST that takes advantage of the many features of the computer. Practice scales and arpeggios are output through MIDI as well as the internal sound chip thus assisting the player in developing a technical mastery of scales and arpeggios.

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Update: Atari

by Joe Waters

In the past two issues, I reserved this section for "Update Atari," a column focusing on Atari Corp news. In spite of a diligent search of the world's press, I have found very little, if any, Atari news this month, certainly little Atari computer news. The following letter, from Jeffries R. Ayers, may shed some light on why there is so little computer news from Atari.

My business, until recently, was organized around a Mega 4, with a quite decent 486 based clone giving me access to some technical areas not recognized by Atari programmers. When I desperately needed additional speed and memory on the Atari side, I ordered a TT from a "local" dealer, who promised me almost weekly for 8 (not a misprint) months that my machine would be "here next week at the latest." I finally called and cancelled my order and installed a Gemulator board and have since enjoyed a small increase in speed, plus memory I can live with, and a dazzling screen to boot.

I strongly considered a Falcon, with adequate upgrade in speed and memory, to presumably carry me into the next century...but after totaling up the cost of an adequately enhanced Falcon and convincing my wife that, yes, this was the way to go, and Toad's Christmas show was the time and place to make my dreams come true, I had a most revealing conversation with Customer Service at Atari in Sunnyvale. I found a brand new, in-the-box Mega STE at a local salvage dealer, bought it for my daughter, and called to inquire whether it would be worth the price of a stamp to send in the Warranty card, since it was not purchased from an authorized Atari dealer. Oh, yes, new and with a card, Atari would certainly honor the warranty...but I then raised the question of when more TTs would be available. She told me that Atari was completely out of the computer business. So, I said, the only computer from Atari is the Falcon. No, she said, Atari is no longer in the computer business, having returned to its game machine roots. This was not a statement that the machines were not being made at this time, with some sort of vague promise that the future might be better. I felt a chill. By letting my subscription to *Current Notes* lapse, did I miss out on the official announcement?

Well, I am now moving into a 90 mhz Pentium (which I am assured DOES divide correctly!), and moving the Gemulator board, as well. Why not? Great Atari emulation takes up next to no space on my gigabyte+ hard drive that came with the machine. Same is true for *Pagestream* and all the other ST programs that have served me well. But, interestingly, I get ALL of this for less than the price of an enhanced Falcon with less storage. PLUS a full year on-site warranty. Time will tell whether *Pagestream* will continue to serve me for the sort of rapid-fire DTP I live on. In fact, it is really difficult to say why I bother with the grudgingly dispensed, sometimes innovative, but generally trailing-edge technology from Atari Corp at all. But, as long as the comfortable old show continues to serve, I suppose I'll continue to use it. As soon as the utterly brilliant Dave Small turns his Spectre GCR into a PC board, I suppose I can dispose of the Atari boxes entirely.

Jeffries R. Ayers

No MasterCard or VISA

Technology has descended upon our local bank. It has moved to an all electronic charge system and now only accepts charges generated by these automated charge machines. You know the kind, slip your card through and it automatically rings up the bank and checks out your account. For a large retail outlet, this is cost effective, but not for a small business like ours. Indeed, the bank won't even supply the units if you are not a walk–in retail establishment. So, I'm afraid we are back to check or money–order and can no longer accept MC or VISA charges.

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Moving? Be sure to send us your new address!

The Cover. Spring is right around the corner now; time to get out and go for a hike! Photo by Joyce Waters.

Letters to the Editor

Pagestream, in Color

Dear Joe,

I would like to correct a mistake which was in my article "Upgrading to a Falcon" in the Jan/Feb *Current Notes*. In it, I said that "*Pagestream* is another program that seems to work properly only in the two-color mode." I based this on my own experience and information I was given when I called Soft-Logik.

Since then one of your readers, Michael Olin, suggested that I may have been using my old .INF file. He was correct. I deleted the old .INF file, ran *Pagestream* again, and reset my default paths. *Pagestream* now works in color. My apologies to any readers I misled, and my thanks to Mr. Olin for his help.

John W. Godbey

Atari Smiles

Dear CN,

An Atari computer was donated to the Imam of a local mosque. I went to look it over—a good thing I did. The Imam was having difficulty setting it up. After explaining and assisting him, it was completed.

"I'm surprised," I taunted him. "Why didn't Allah help you?" "He did," said the grinning Imam. "I asked for help, and you came."

* * *

At one of our informal, family discussion sessions, we talked about the character and personality of our neighbors and centered on a family up the street who borrowed things. We conceded they did this as their way of making the neighborhood a friendlier place. For example, they would borrow a pie plate, cookie sheet, wheelbarrow, wagon, etc. then return it filled with something.

"Oh, good!" exclaimed our teenage daughter. "I'm going to let them have one of my empty computer disks."

Friendly yours,
Joseph E. Hicswa

Help the Amateur Computist

Folks...

Even after years of Atari XL, XE, STf, STE, and now Falcon ownership, I'm still an amateur computist. I would say 80% of the text in CN is still over my head. I don't want to program; I don't really want to know how its done. It seems there's a lot of specialty jargon present, as though one article is speaking to the other articles in computerese, not knowing there's a human there holding the magazine, still having trouble with the item selector. Wondering why I reach dead ends with dialog boxes, wondering why a simple word processor isn't built into ST Fax so that when you click on sendfax, you begin typing a letter and then send it.

I'll bet there are a bunch more people using their Ataris who would love to see at least 25% of computer articles devoted to showing simple procedures which can make computer ownership less annoying. If, somehow, the gurus in your pages could help novices be more comfortable with their GEM-TOS, then a transition to ensuing levels of use would not appear too formidable.

I have Ralph Turner's books. I don't have enough time to spend at my Falcon to call up BBSs and I don't care for clubs. I am a "Solitary Atari." CN is my umbilical.

Thank you all, for all your fine work. I really appreciate the effort.

Hopefully, this subscription for my brother will encourage him to at least boot-up now and again. He's got this STe sitting there, and he still uses his old typewriter, w/LCD screen, to type letters.

Bob Salopek

Kudos for Henry

Hello Henry K. van Eyken :)

Just a short few lines to say thanks for another fine article in CN. As a frequent user of *Edhak*, too, I wondered ‹but not for long› how it would compare to *Edith*, and, fortunately, that is not the tack the article took ‹I love these kind of surprises.›

After reading the article and appreciating your exploration of *Edith*, I found myself thinking, "Gary, you, too, can make good use of this program." And I will, soon, I hope.

I think Joe Waters is fortunate to have a line-up of very fine writers for CN, but I feel that in Henry K. van Eyken, we readers are doubly fortunate to have your concise, to the meat-of-the-matter views, no fudging.

If I had to describe what you do, briefly, I'd say: Writes with care and, always, with class.

Thank you very much.
Gary C. Matteson

Peddle by Pedal

Dear Joe,

I'm that last person to be an English pedant, my grasp of the language is about as shaky as any, but David Barkin's comment on page 23 of the Jan/Feb '95 issue caught my eye. He writes, "Architects . . . are going around *pedaling* (my emphasis) their work..." But a pedal is a lever worked by one's foot. The word David wanted was *peddle*. I confess I made the same mistake a long time ago when I worked for a trucking firm. I couldn't understand why certain runs were called "pedal runs"—until I saw it spelled out as "peddle runs." These were mixed loads going to a number of different purchasers.

The Oct/Nov '94 issue also had a similar blunder. I'm not sure where I saw it, but someone wrote, "towing the line" when they meant "toeing the line."

I'm glad to see an upswing in practical articles for the ST. The return of Dave Small is especially welcome. I hope he will answer some of the questions posed by his "experts only" quiz; at least in general terms.

Regards,
Brian Earl Brown

D2D on Falcon

I read in CN Aug/Sep issue where Paul Lefebvre mentions not knowing much about direct-to-disk recording on the Falcon. Well, I am a musician and I mainly use the Falcon for this purpose and would like to make a few comments.

The A/D D/A converters on the Falcon are OK, but not of the highest quality compared to stand alone converters or, what I use, a DAT machine. But, for the price, what would you expect? For any musician, mixing to DAT is standard procedure, and a DAT with Dig I/O (SPDIF, etc) combined with a digital interface for the Falcon (Steinberg's FDI, etc) makes for a wonderful marriage. In a nutshell, Steinberg has just released *CuAudio Falcon* that gives 8 track uncompressed and 16 track compressed AIFF compatible (Mac format) audio files combined with a pro level sequencer, and the Falcon is now performing great. Initially, there were software and hardware problems, but most of that seems to have been addressed.

I am not familiar with the other sequencer or digital audio programs out there for the Falcon, although I see a few new ones showing up. But, as far as the Falcon is concerned, the price/performance ratio is great. Try to put together a 16 track studio with sequencing for a comparable price on ANY platform. And, finally, my two cents in praise of Atari (the computer, not so much the company.) Things always change, but I am amazed watching people use Mac and PC for music applications and the backflips and jumps they have to make to get what the Falcon makes very easily. Built in MIDI ports, top notch DSP chip, a solid CPU and operating system. I hope Atari stays around, but as always the Falcon is doing exactly what I bought it to do. That's enough.

Music Specific Recommendations:

1. Digital Audio is 5MB/minute mono, 10MB/min stereo. Get 14MB RAM.
2. DAT machine with at least SPDIF Digital I/O.
3. Digital interface for Falcon.
4. Steinberg also makes a 4 stereo bus box that connects to the Falcon's DSP prot. All 16 channels can be bussed to any one of these outs.
5. And, of course, as big a hard drive as possible. There's a lot of data and a lot of backing up to do.

P.S. Thanks, as always, for your fine publication.

Ken Minardi

Printing Solutions

Sometimes my Atari 8-bit system offers me exciting challenges that can be frustrating, but elating when the problem is solved. For example, the time a new printer was purchased . .

My system consists of the following hardware: Atari 130XE computer, 810 disk drive, Atari XDM121 daisy-wheel printer and the new Epson 5000 24-pin dot matrix. Both printers are cable-chained: Disk Drive→Atari printer→Epson printer. Atari now prints my labels and postal cards; Epson prints the envelopes, letters and articles.

First time after the chaining and trying to print out labels with Atari, nothing happened. Epson was off, connections-rechecked. There was no evident physical problem. It alarmed me, thinking there might be something internal in Atari.

With *First XLENT WP* still in memory and on screen, Atari XDM was switched off and back on again. That caused an error message to appear on the Xlent screen: "INPUT OUTPUT ERROR." With the Atari XDM still switched on, protocol for printing out the labels was followed anew. It worked! How about that. Atari printer switched off, back on; refollow printing routine.

Now, whenever I want to use the Atari printer, text is sent to printer, Atari switched off, then back on, and I tell Xlent to try again. It does, and gets the job done.

There was another problem. The above process put the first line of a label or text into Epson memory and left it there despite everything being switched off.

To solve this, Atari is switched off when the printing is ended. Then Epson is switched on and its memory cleared. It is then ready for immediate or future printing. Another problem solved. It was a grand feeling.

I just had to share this with our Atari family. No doubt some of you solved a problem. Share it with us.

Friendly yours,
Joseph E. Hicswa

Reply to Walter Kordas

I can understand your frustration about the *3D– Calc* program, because my version 3.04 does not append or update the spreadsheet correctly on my computer, either. I would load an established spreadsheet, do some updates, and then save the spreadsheet. When I loaded the spreadsheet for the next updates, all the fields in the sheet would have ##### "pound characters" for the data. By the way, I am updating level seven with data summations on the first level.

The Michtron version I talked about in my article was 2.30, which does work on my Falcon. I know you are not happy to hear that, but have started the ball rolling by contacting Oregon Research and telling them about this problem. I just quit using V3.04 of the program. I am sure Oregon Research will contact the author and tell him about the problem and demand an update to the program. If Oregon Research wants a copy of my spreadsheet to send to the program author for test material, I would be glad to provide it; they have my address on file because of other software purchases.

The *3–D Calc* spreadsheet is still a good concept and this spreadsheet program could meet the needs of the home user. I like the program because it contains the 3D feature, which all other Atari spreadsheet programs do not have. Walter, because of your efforts in contacting Oregon Research and writing to CN, maybe the program will get fixed. I sure hope the author can find the bug, fix it, and release a new version.

Alvin Riesbeck

GOOD NEWS AND BAD NEWS

Atari Industry News and Announcements

The Toronto Atari Federation Presents ACE '95
April 1, 1995 - April 2, 1995

We have booked the North York Civic Centre, MEMORIAL HALL facility—5,000 square feet in four rooms! The superb Civic Centre Complex features excellent highway access, high speed local route access, as well as airport, bus, subway, car and truck access. In the main complex itself, you'll find the NOVOTEL HOTEL, Civic Center SHOPPING MALL & an excellent FOOD COURT immediately adjacent to the Show Hall, in addition to other RESTAURANTS and SERVICES. We're also located on Toronto's famous Yonge Street! The location features high traffic volume and a site central to several thousand Atari users from Toronto, Southern and Eastern Ontario, Quebec, Western New York, Pennsylvania, Ohio & Michigan!

Howard Carson, Chief Organizer for ACE'95 announced the following Exhibitors List (as of January 22/95): TOAD Computers, It's All Relative, Suzy B's Software, DMC Publishing, ABC Solutions, Scarborough Computers, Esquimalt Digital Logic, Cybercube Research, Missionware Software, Branch Always Software, ICD INC/4Play/Black Cat Designs, Gribnif Software, GEnie Information Services, C-Lab, and Clear Thinking. New Exhibitors are signing on every week!!

The most exciting product line-up in years is slated for ACE'95. Dealers & Developers from Europe and North America will be showing and selling the latest versions of *everything*! ACE'95 will feature dedicated MIDI, Jaguar, Computing, User Group, and Seminar Areas. The Memorial Hall Exhibition Facility is modern, intimate and located right in the middle of *everything*!

Show tickets are only $6 per day or $10 for the entire weekend. Your Single Day or Weekend ticket will give you admission to the ENTIRE SHOW including, all LECTURES, SEMINARS & WORKSHOPS (1st come, 1st served, of course), all DEMOS, & the Keynote Speaker. All Show Tickets are automatically entered in all the DOOR PRIZE and GRAND PRIZE Drawings—extra Drawing Tickets are only $2 each. For advance forms, call, write or E-Mail; see the addresses and numbers below!

Many Exciting Show events are scheduled: especially the Awards for our BEST OF SHOW CONTESTS for Graphics, MIDI, DTP, Video, and Animation, as well as TAF's Official Software and Hardware Awards.

We've got a surprise, too! A very special Guest (Keynote) Speaker, actually, who will be addressing everyone at the Exhibitor/Volunteer Dinner, as well as giving a SHOW SPEECH. Believe it or not, there are great things in Atari's future!

Getting to ACE '95 is easy. If you're coming from the United States, cross the border at Detroit, Fort Erie, Buffalo, Kingston, Champlain, Ogdensburg, etc.; get on Highway 401 and head for Toronto. When you get to the Yonge Street Exit (Hwy #11 on some maps), take it and go North for 6 stoplights, to 5110 Yonge St. (at Parkhome Ave.). Turn left and you're there! For those of you who take the QEW Highway from the border (if you cross at Fort Erie or Buffalo, that is), just follow it until you get to either Hwy #403, Hwy #427 or Don Valley Parkway: they all connect with Highway 401. Take the 401 to the Yonge St. Exit (Hwy # 11 on some maps), take it and go North for 6 stoplights and you're there. There is street-level and underground parking. Remember that your local AAA or CAA branch can supply you with a Triptik, Toronto Map & Ontario Road Map, too! For more information, please call us at (416) 752-2744 or (416) 225-5823.

Sacramento Atari Computer Exposition
Saturday, April 22nd

The third annual Sacramento Atari Computer Exposition will be held Saturday, April 22nd 1995. The show will run from 10:00 am to 6:00 pm. The event will again be held at the Towe Ford Museum near Old Sacramento: 2200 Front Street, Sacramento, CA 95818.

The museum in which the show will be held houses the world's most complete antique Ford automobile collection, with over 170 vehicles. Near historic Old Town Sacramento, the Museum is just around the corner from the Crocker Art Museum, the California Railroad Museum, and the California State Capitol building. As an added draw, showgoers will also be admitted free into the auto exhibits.

The Towe Ford Museum houses a large special events area in which the SAC Expo will be held. It was modeled after the facade and forecourt of a famous area theatre; including a giant pipe organ donated from the estate of Cecil B. DeMille. The event area also includes a concealed auto ramp, allowing vendors to drive directly into the show area to load and unload their product.

This year's SAC Expo is being produced by the Towe Ford Museum. STAR and YAC (The Yoho Atari Club) are coordinating as the show committee and will be operating the event as in years past. Having the show as a museum event allows the clubs to save a great deal of money in these tough times, and it will help the museum, in turn. All proceeds from this year's show will go directly to the Towe Ford Museum.

Vendors interested in exhibiting are encouraged to contact Nick Langdon, SAC Expo Vendor Coordinator, (916) 723-6425.

Toad Computers Announces Internet Support Services

Toad Computers is proud to announce online support on the Internet, including a World Wide Web (WWW) homepage, an ftp site, and e-mail for sales and technical support.

The World Wide Web homepage allows customers to get product information (like Jaguar game screenshots and availability dates), request a catalog, learn more about Toad Computers, and view Atari-related graphics and animations. Right now, the Toad Homepage even allows online ordering of some products, like clearance games.

In addition to resources specific to Toad Computers, the Toad Homepage offers pointers (or hypertext 'hotlinks' as they are called) to other Atari-related resources on the Internet, including software archives, newsgroups, and other Atari-oriented WWW homepages.

"We believe that the Internet is an important new me= dium," says Dave Troy of Toad Computers, "and if it helps us to provide better service to our customers, we want to be a part of it." While there is no graphical 'Mosaic'-type WWW browser for the Atari, Toad Computers is very interested in seeing one developed. According to Dave Troy, "Hypertext Markup Language (HTML), the raw text underlying the Web, is extremely straightforward. The tricky part of getting Web access on the Atari is the TCP/IP connection that PC's can get using a program like Trumpet Winsock. Once a PPP (point--to-point protocol) connection can be made reliable, a web browser should be fairly easy to implement." Right now, there are a few packages (such asKA9Q/NOS/STNET/MintNet) which deliver PPP access on the Atari, and ZFC (the makers of *Edith Professional*) have been talking about writing a graphical browser. It is likely that, before the end of the year, software should be available to allow Atari PPP and WWW access through a variety of local Internet access providers.

For now, to access the WWW homepage, Atari users will have to use Internetworked PC's or Mac's equipped with a *Mosaic*-type browser. "It shouldn't be too hard for someone to find a Mac or PC running Mosaic. Many Atari users use these systems at work, and they can also be found on just about any school campus—from university to community college, everyone is running Mosaic!" says Troy.

An ftp site is also available for Atari users to download files that pertain to Toad Computers, such as our SYSINFO system & modem tester, STraight FAX! support notes, and ordering information. Right now, CompuServe, America Online, and GEnie all offer limited FTP access, so users of these services should have no problem accessing this site. And, of course, any machine on the Internet can be used to access this site using a conventional ftp client. The KA9Q PPP package for the Atari includes a built-in ftp client.

Toad Computers has always been available through e-mail, but Internet e-mail allows greater flexibility and faster response times. "With our e-mail on GEnie, it has always been a project to read it and respond quickly," says Troy, "and that has been particularly true with the huge volume of mail we received after mailing our most recent catalog."

If you have sent e-mail to the 'toad@genie.geis.com' address, please be patient; it will be answered. However, for an immediate response, please direct all e-mail to our new address, 'toad@charm.net'.

Toad Computers does not plan to stop visiting the Atari ST/Jaguar Roundtable on GEnie. "GEnie has always been a core part of our online support, and we appreciate the relationship we have developed with customers and developers there. We will continue to post specials and news files on GEnie, and we will also continue to be involved in the Bulletin Board areas," says Troy. And, of course, any e-mail received at 'toad@genie.geis.com' will be answered. However, customers are once again reminded that response will be faster if e-mail is sent to 'toad@charm.net'.

Toad Computers Internet addresses are as follows:

WWW Page:	http://www.charm.net/toad/
Anonymous FTP Site:	ftp://ftp.charm.net/pub/home/toad/ (ftp to ftp.charm.net, go to pub/home/toad directory)
E-Mail:	toad@charm.net
E-mail from GEnie:	toad@charm.net@INET# (@INET# instructs GEnie to use their Internet e-mail gateway)

For more information, Toad Computers may be reached by mail, telephone, or FAX, as well.

Toad Computers, Inc.
570 Ritchie Highway
Severna Park, MD 21146-2925

Phones: (800) 448-8623 Orders; (410) 544-6943 Information; (410) 544-1329 FAX; (410) 544-6999 BBS; (410) 544-0098 FAXBack.

New CompuServe Rates

CompuServe has announced new Standard Pricing Plan rates that significantly cut connect-time and mail charges, allow access to more basic services, reduce United States and Canadian WATS-line charges, eliminate European prime-time communications surcharges, and raise the monthly membership fee by $1.

Effective 05-Feb, connect charges for access at 9.6 and 14.4 kilobits per second dropped by 50 percent to $4.80 per hour. This is CompuServe's third price reduction in connect-time rates in three years.

At the same time, CompuServe enhanced its basic service package, giving members access to more than 100 services at no additional charge, compared to 78 previously. Members also are able to send the equivalent of 90, three-page electronic mail messages at no additional charge, compared to 60 previously. Electronic mail costs have been reduced by as much as 80 percent.

The monthly membership fee increased by $1 to $9.95. The new fee includes free access to the Executive Service Option (ESO). ESO surcharges for specific products continue to apply. In Western Europe, the CompuServe network $7.70 per hour prime-time communications surcharge was eliminated. In the United States, Wide Area Telephone Service surcharges

were cut by 31 percent to $6 per hour. The Canadian WATS-line charge was cut by 41 percent to $20 per hour.

For complete information about current pricing in your location, GO CHOICES.

International Distribution of Power Per Post (Germany) Products

DGS is pleased to announce that it is now able to sell ALL Power Per Post products outside of the UK. The versions we will be supplying are the International versions, with full English instruction manuals, and full English prompts, etc., within the software itself. The current range of products available in the International PPP range are shown below, along with their prices in US$ and (UK pounds):

QUICK, $28 (£13.95), is a new, powerful programming language, which allows direct use of the Atari's unique features, for the Atari XL/XE. *QUICK* is a very structured language and looks a little like C, PASCAL, and BASIC. *QUICK* has built-in functions to play digitized sounds, move player/missile graphics, handle Blitter, utilize an ST mouse, and more! *QUICK* has an easy-to-use built-in text editor. RAMDISKs are also supported, so you can compile from RAM for amazing speed. *QUICK* programs are turned into machine code .OBJ files for running from DOS. *QUICK* is supplied on a SS/SD disk with the compiler/editor, four libraries, and lots of demo programs to look at. You also get a 48 page A4 sized typeset manual.

QUICK Support Disk 1, $10 (£4.95), is packed with tutorials, demo programs, source code, and extra libraries. The tutorial files can be viewed and printed (on Epson and Atari printers) directly from the menu on the disk. All these are crammed on a DS/DD disk (some people call this density enhanced/medium/dual/1050/127K), so you will need a 1050 or equivalent. In total, you will get 13 tutorials, 13 source codes, 2 libraries, 6 header files, and 7 ready-to-run programs.

Screen Aided Management (SAM), $28 (£13.95), is a new 80-column desktop environment for the Atari XL/XE. *SAM* is very much like some other systems of this type found on computers like the ST and IBM PC. *SAM* is supplied on a SS/SD disk, along with a 26-page manual.

SAM Budget, $14 (£6.95), a new accessory disk for use with the *SAM* 80-column desktop system, is a spreadsheet program that takes full advantage of *SAM's* 80-column display, and mouse and joystick input. Features include Direct Calculations, Indirect Calculations, and Functions (single or multiple parameters). *Budget* also has advanced editing facilities, including column and row copying and deletion, and easy movement around your spreadsheet. *Budget* runs under *SAM*, so the *SAM* desktop system is required to run *Budget*.

SAM Utility Extensions Disk, $8 (3.95), another accessory disk for use with the *SAM* 80-column desktop system, contains two accessories: *SAM Convert* and *SAM Creator*. *Convert* will convert text files to and from the SAM Texter format. *Convert* will convert from ASCII, *AtariWriter*, *StarText*, and *AustroText* to *SAM*, and from *SAM* to ASCII. *Creator* will convert *SAM Painter* format files to *Micro Painter* format and vice versa. This disk is supplied with a user manual.

SAM package with Budget (spreadsheet) and Utility extensions disk: $44 (£22).

SAM Designer, $14 (£6.95), a powerful drawing and design package for creating mode 8 high resolution graphics, can also import text from *SAM Texter* (which comes with *SAM*), and has a set of schematic icons for creating circuits. All options are icon operated, and the package works with both joystick and ST mouse. The package comes with an easy-to-follow manual, and needs *SAM* to run.

Quick Ed character editor (doesn't need *QUICK* to run), $10 (£4.95), from PPP is the only character set editor that supports joystick, mouse, and touch tablet input! *QUICK Ed* is an advanced font editor that allows you to create new fonts or edit existing ones using a simple colored grid on the screen. There are also facilities for inverting fonts, shifting characters left and right, flipping characters, and lots more! *QUICK Ed* comes on a SS/SD disk with lots of example fonts, and a printed manual.

We now have UK distribution rights to four new games from Power Per Post in Germany. These games have been written in the new *Quick* language and will work on any XL/XE. All disks require a 1050 disk drive, or equivalent.

MINESWEEPER is a brain twister with an easy aim: find the hidden mines and disarm them. This games works with both mouse and joystick. Good graphics and game play.

GLAGGS IT! is a puzzling game for one player. Tubes of different colours are falling down to be sorted by you in rows of 3 to 5 pieces. Great strategy game with lots of on-screen colours!

RUBBER BALL is a tricky game for one player demonstrating perfect fine scrolling on your 8-bit Atari. You have to move a rubber ball through the cornered corridors of an air conditioning system.

BOMBI. Guide Bombi around a 3D platfrom defusing bombs without getting killed! Excellent 3D graphics and digitized sounds.

All four PPP games cost $10 (£4.95) each. Or, get all four for $26 (£12.95)! All prices include delivery within the UK, but EXCLUDE international delivery, which is 10% on top of your total order value (minimum $5 (£2.50)). Payments can be accepted either in CASH in US$, or by IMO in UK pounds.

All products are in stock, and ready for shipping.

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62 Thomson Ave
Balby
Doncaster DN4 0NU
United Kingdom

Phone (in UK): (0302) 855026
International: +44-302-855-026
E-Mail: dx107@cleveland.freenet.edu

New 8-bit Gore Products

GTRACKER- - A sample sound sequencer program for Replay/Parrot compatible sound files. Digitize your own sounds and sequence them into a song file. Twin disk pack with several demo files, a player program and a printed manual. Price: £6.50 or $15.00, including shipping.

SUPER PRINT-LAB XE — A new graphics design and print program for use on 128k (or more) machines. Features include the usual array of art tools, extensive support utilities and printer support for Atari 1029, Atari 1020 (in full colour) and Epson compatibles. Price: £6.95 or $16.00 including shipping.

Other titles:

JAWBREAKER 4 pounds sterling or $8.00

MOUSEKATTACK 4 pounds sterling or $8.00

Buy both *Jawbreaker & Mousekattack* for only 6.95 pounds sterling or $14.00

ARENA 5 pounds sterling or $10.00

BUBBLE ZONE 5 pounds sterling or $10.00

Richard Gore
79 Sprotbrough Road
Sprotbrough
Doncaster DN5 8BW
United Kingdom
Internet: chmrig@leeds.ac.uk

MYTEK Moves!

MYTEK is back online with GEnie and the rest of the world. Everything is moved and stuff is set-up for business. Even though the actual physical location has changed, the original address and phone number information has remained the same and is as follows: MYTEK, P.O. Box 750396, Petaluma, CA 94975-0396. FAXLINE: (707) 527-0674

Since MYTEK's staff is extremely small (1 employee), it isn't possible to man the phonelines, nor is it feasable to have people just "dropping in," hence, the absence of a voice phone number or a street address. This may be frustrating to some individuals but, through past experience, it just isn't possible to develop and produce products *and* chat with customers on the phone all day when you are a business of one person.

Prism Studio is a real product, which is now shipping to customers. MYTEK hopes to generate more sales to justify the next version. This version would go to the first six people to respond to my latest ad. There appears to be little interest in this product at present. The new version would provide an even cleaner picture lock, and be more usable with tape to tape titling. Digital fading would be included.

Super Products Joins the Internet

James Bradford is the current vendor/developer of the Super Products. He has taken it over from the original owner. Please contact James at:

masstorage@closer.brisnet.org.au

proTOS Convention, Bonn, Germany

[U.S. Atarians may be interested in some new products that were shown in Germany last November. The following highlights of the convention are extracted from a review by Olaf Kaiser, printed in the TAF newsletter, *Phoenix*, January 1995.]

The proTOS convention, the biggest convention for Atari computers in Europe, opened its doors at the last weekend in November at the "Messegelaende" Bonn (Germany). Most of the European companies, which develop for the Atari market, some companies from overseas and Apple Computer(!) were there. Atari itself wasn't there! The proTOS convention was organized by some of the German ACCs (Atari Competence Centre).

First, I want to talk about the three ultimate highlights of this convention.

MEDUSA T40/T60

The Medusa T60 is the successor of the Medussa T40, the first Atari clone ever made. The T40 works with a MC68040 / 64 MHz (internal). That means a power of 26 MIPS (Atari F030: 3.84 MIPS). The new T60 with its MC68060 / 64 MHz has a power of 100 MIPS (!). Both computers work with 32 bit data and address buses. Price: about $3,800 (68040 mainboard+ST/IO card). Medussa computers are made by MEDUSA Computer Systems, F. Aschwanden, Buchhaldenstrasse 16, 8610 Uster, Switzerland. Phone: +41 1 940 92 54; Fax: +41 1 940 19 49.

EAGLE

The second TOS compatible computer is the EAGLE from GER-Soft. At the moment, it only can be bought with a MC68030 / 32 MHz. But this 030 version is two times faster than an Atari TT, because the Eagle has a better bus system than the TT. This bus system called Eagle CHannel is a 32-bit Full Range Channel, which includes all signals; and it is independent of the CPU used. It works with MC680x0 CPUs, but it can work with PPC, ALPHA and Intel 486/586 CPUs, too. In spring 1995, versions with MC68040 / 64 MHz and MC68060 / 64 MHz will be available. Price: about $2,500 (68040 version). The Eagle is manufactured and distributed by GE-Soft mbH Comptuersystems, Landgrafenstrasse 37-39, 53842 Troisdorf, Germany. Phone: +49 2241 40 64 92; Fax: +49 2241 40 65 89.

MAGIC MAC

MagiC is a multitasking OS, like MultiTOS or Geneva, which runs on the Atari ST(E) and TT. MagiC Mac is the same for Apple Computers (030 and 040 CPUs), which allows them to run TOS software on Apple hardware. But MagiC Mac is not a slow software emulator. With MagiC Mac, TOS software is running on Apple computers much faster than on an Atari TT! With MagiC Mac you can run *Calamus SL, Signum!3, Phoenix, Twist II, Harlekin III, Pure C* and many more on Apple computers. MagiC Mac is distributed by Application Systems Heidelberg Software GmbH, P.O. Box 10 26 46, 69016 Heidelberg, Germany. Phone: +49 6221 30 00 02; Fax: +49 6221 30 03 89; BBS: +49 6221 30 36 71.

Hey, all! It's been one year since I took over as ST editor for *Current Notes* and, so far, I've enjoyed every minute of it. *CN* would not be possible without the incredible support from our readers (who in many cases turn out to be our writers). I don't know how much longer we can last, but I do want to say "thanks" to all the Atari users out there.

I have many magazine subscriptions available from my real job at a software development company. One of these magazines is *Infoworld*. Let me quote you part of an article that appeared in the December 26/Jan 2 issue.

Prediction for 1999:

After having given up on the business and home-computing markets in the 1980s, Atari makes a bold attempt to re-enter the business market with its new model STLN computer. The STLN is based on a super-conducting, 100-gigahertz, 65,536-bit Motorola with a self-contained, liquid nitrogen cooling system. The STLN uses a real-time, parallel-universe, graphics resource allocation system, which enables the machine to display an unlimited number of colors in any resolution with instantaneous redraw speeds. The system, which will be available in the fourth quarter, will be sold for $139 through K-Mart and Toys-R-Us retail chain.

I don't know about you, but I thought it was very funny. I think this says a couple things about Atari and their users. First, it assumes that Atari will be in business in 1999. It also says that Atari's "Power without the Price" slogan was probably one of the best advertising ideas in recent memory. Too bad it didn't work, though.

OS/2 and You

How many of you have seen the ads for *OS/2 Warp* in magazines and on television? Almost all, I would presume. It's made out to be the best thing since Spam. Since I've always felt that replacing *MS Windows* would be a good idea, I went out and bought *OS/2* for my work PC. I've got a relatively speedy Gateway 486DX/66, 8MB RAM, VGA, etc., etc. After spending the better part of a Saturday installing it (it comes on about 30 disks-- *Geneva* for my ST came on one!), I have a couple observations:

* It's big. Takes up more than 50MB on my hard drive.
* It's slow. Slower than *MS Windows*, and at times slower than my 16MHz Mega STe.
* It has some nifty software. *IBM Works* is at least as good as *AtariWorks*.
* Slick interface.
* Low price. Only cost $80!

Overall, I like it. It sure would be nice to be able to use a computer without the hard drive constantly buzzing though. Sometimes I'll click on a menu item and the hard drive will be accessed for 10 seconds. Annoying.

Act Now: Write for CN!

Remember what I said earlier about many of our readers becoming our writers? Lately, my in-basket has been getting a little low. That means one of two things. I'll have to write more articles. Or, you'll have to write more articles and send them to me. Since there are a lot more of you (readers) than there are of me (ST editor), I urge you to consider writing for *CN*. Imagine your name on the table of contents. Brag to all your family and friends that you write for a computer magazine that's been around for more than 10 years! If you think your writing stinks, remember there's an editor here. As we say here in Maine, "There ain't nothin' I can't fix up!" (plug in your favorite Maine accent).

Writing for *CN* is easy. There is no specific format or length or topic or content; well, you get the idea. Just write what you want. Even if it's not specific to Atari, I'll print it as long as Atari USERS might find it interesting. Joe will even extend your subscription and you might even get a few extra issues to give to your friends. Of course, we don't pay, but who said Atari users are in it for the money? I look forward to having my mail boxes (both electronic and real) swamped with your articles. Here's how I can be reached:

Paul Lefebvre
90 Granite Street
Portland, ME 04102
E–mail: Delphi: PLEFEBVRE
Genie: P.LEFEBVRE
Internet: PLEFEBVRE@DELPHI.COM

Jaguar ST?

Heh, heh. Just kidding. There's no such beast. However, there is a Jaguar. And a new game has just come out for it: *Doom*. As much as I hate to admit it,

I recently rented the Jag just to play this game. If you have never played *Doom* (and you're an adult over the age of 18), you really should give it a try. It is the most violent game I have ever played, but it sure is fun! If I were not positive, I wouldn't have wasted so many hours killing Imps and Demons. I would run right out and buy a Jaguar just to play this game.

There has been a lot of talk on the internet lately about a JagST, but I just don't see it happening. Unless it runs OS/2. That would be cool.

Delphi and the Internet

If you're interested in connecting to the internet, Delphi is the place to be for Atari users. Next issue I plan to describe the usenet and how to access it from Delphi. Delphi has complete access to the internet, but its lack of an Atari front-end can make it a little daunting for newcomers.

I'm Off

I hate taking up a lot of space with my rantings (I'd rather leave more space for other things--preferably your articles) so I'll stop typing now. Note: currently in the works for upcoming issues are reviews of *Papyrus Gold* and *ExtendDOS Pro* and an Internet article: Behind the Hype.

Trak-Balls
$16.95 +S/H

Yes, the same trak-balls selling for $29.95 and reviewed in *STI* (May '93) and *CN* (Sept.'93) are on sale for a limited time at an unbelievable price. All come with 1 year warranty, PD-disk. Many configurations and upgrades available. Pick one up today –

Any questions?

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Chicago, IL 60656
1-312-763-1822

S/H: add $5 for 1st, $2 add'l trak-balls. Check, MO OK, COD $2.50 extra. Rechargeable AA NiCads still available: 6/$10.

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- STeno
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- CManship
- GFA Basic Toolkit
- GFA Basic
- DEKA
- Flash II
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- King's Quest IV
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- Convector
- Calligrapher
- Timeworks Publisher II
- 1st Graph
- STraight FAX
- Silhouette
- The Atari ST Book
- Warp 9
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- Cyrel Sunrise Graphic Card
- CompoScript
- Home Accounts 2
- ST Accounts
- Safari Fonts
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- That's Write
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- and the list goes on and

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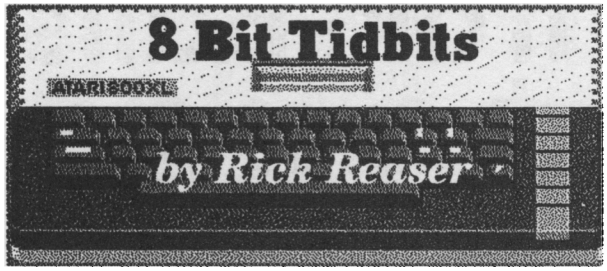
* Non prime time rates are available Monday to Friday 6:00 pm to 8:00 am local time and all day Saturday, Sunday and National Holidays, 300/1200/2400 baud. In some areas, 9600 baud access is also available. Fax: 301-251-6421. This ad was produced using an Atari Workstation and Calamus SL, which is supported on GEnie by DMC Publishing category 16 on page 475;1. All trademarks and tradenames are the property of their respective holders.



When It Rains, It Pours

Unlike last month, I have more material than I could possibly use. I will keep my column really short this month in hopes that we can run five short 8-bit pieces in this issue. Next month, we should be running the reviews of *PabQWK 2.0*, *QWK8*, *FlickerTerm*, and *Ice-T* (and anything else that we couldn't fit in). So be patient and keep writing.

Elsewhere in This Issue

This month, several old heads here at *Current Notes* provided us with some material. Robert Boardman gives us his impressions of Branch Alway's *PC Xformer 3.0*. Mike Todd reviews the new British 8-bit Memory Map Book, **The Complete and Essential Map for XL/XE**. Tom Andrews provides us with some *AtariWriter* printing tips.

We also have two new writers joining us this month. Wendell Hong, our *Djinni* reviewer, has been an avid Atari user since '82 when he got an Atari 800 for Christmas. With the exception of a few upgrades, he's still using that same 800, too! Wendell has been an active member of the Atari 8-bit RoundTable since '87 when I joined GEnie because of a promotion that let Atari users sign up for free. He hasn't regretted it since! After traveling the world for eight years via the US Navy, he's now settled in Hawaii and has a Chinese Shar Pei dog named "Princess." He's also a big Japanese animation enthusiast, which accounts for all those ColorView pictures of Japanese animation subjects on Genie.

Lastly, we have Joe Walsh. Joe graduated from California State University at Hayward with a B.S. in Business Administration. He's currently working for a holding company located in Illinois, as Office Services Coordinator. Hobbies include programming, reading anything that he can get his hands on, role-playing games, and playing videogames.

Joe's article is a condensation of many thoughts he's provided on the Internet regarding the state of computing and the Atari 8-bit. His thoughts created quite a stir on comp-sys-atari-8, so I thought they would be worthwhile sharing here in *Current Notes*. I hope you enjoy his essay.

PCX 3.0 Docs Update

In the Oct/Nov '94 *CN*, I mentioned that Bill Kendrick wrote the documents to *PC Xformer 3.0* for Branch Always Software. Bill has given me the following short update.

Due to the costs of printing, the documentation for *PC Xformer* had to be scaled down a bit, but the scaling was 90% reformatting and font-shrinking. Instead of 13 appendices and a 16-page glossary, there are now 12 appendices, which includes the glossary as appendix 12. The glossary is about 13 pages long (6-point font) and includes over 450 entries!

The docs include seven major sections, one containing eight subsections, and subjects range from general things like requirements and setup, to details like Atari and MyDOS menu commands, the many ways of transferring files between Ataris and IBMs, the *entire* Atari ATASCII character set (including true 8 x 8 graphical images, error codes (for BASIC, TBXL, MyDOS, Atari DOS and SpartaDOS, file I/O, editor controls, colors, graphics, and sounds, and even how to contact other Atari 8-bit users!

Of course, most people will use this information only as reference material, but non-Atari-guru folks will find use in this stuff and perhaps end up hardcore Atari users, even though they don't *have* an Atari anymore (or ever)!?

Bill highly recommends *PC Xformer 3.0* to all those out there who either can't bring their 8-bit everywhere or who just don't *have* an 8-bit anymore!

PC Xformer Version 3.01!

No sooner than we get the review done for the first version and Darek Mihocka starts providing updates. ‹grin› The newest is 3.01 and it adds some minor features that users requested, such as a command line switch to skip the intro screen, a switch to boot up in 800 mode, and a switch to disable Atari Basic. The upgrade from 3.00 to 3.01 is free, just mail your original disk back for the upgrade to: Branch Always Software, 14150 NE 20th St. #302, Bellevue, WA 98007, U.S.A.

Darek also notes that if you have Atari 8-bit software that doesn't run on *PC Xformer 3.0* or *3.01*, please mail him a disk with the appropriate .XFD or .ATR file that has the problem.

By the time you read this, Branch Always will have released a slightly updated freeware version, *PC Xformer 2.51*, that has minor bug fixes and an updated dealer list. It will be posted in the GEnie and CompuServe PC download libraries as XF251.ZIP.

8-bit Hard Drive Optimizers

One of the things many 8-bitters have wanted is an optimizer for their hard drives. Contrary to popular belief, *CleanUp* by ICD/FTe is not a hard drive op-

timizer. *CleanUp*, which only works with *SpartaDOS 3.2* and up, only corrects errors between the File Access Table (FAT) bitmap and the actual directory structure. It also closes files left open for writing/reading and resolves any other internal conflicts. *CleanUp* basically corrects errors.

A "hard drive optimizer" tries to make the sectors of a file contiguous so that the head on the hard drive doesn't skip all over the place when loading a file. After you delete and write a bunch of times, a new file could be spread all over the hard drive. Sparta will write the first sector (or new subdirectory) in the first available empty sector and go from there. If you are adding entries to a subdirectory and the subdirectory goes beyond 256 bytes, it will continue the subdirectory onto the next free sector after updating the pointer. After awhile, the hard drive gets pretty jumbled.

Since the maximum hard drive partition size is 16 megabytes, it isn't clear to me whether this is a real problem, since there really isn't a "slow down" in performance since the partition is so small. Also, you really don't get any more space after optimization, since everything is written in complete 256 byte sectors. All you are doing with optimization is reordering the sectors, in essence.

The only real way to optimize your hard drive today is to do the following.

1. Put all the programs you use and don't change or erase in separate subdirectories.
2. Back up your hard drive with *FlashBack* from ICD/FTe.
3. Rewrite your Hard Drive from the *FlashBack* backup and make sure those subdirectories that have the programs you don't change or erase are the first ones written (first in the listing on the main directory).

FlashBack copies the actual files and not a disk image. In fact, your *FlashBack* backups are optimized (made contiguous) when the backup is created. When you restore your drive using the *FlashBack* backup, the files will be written contiguously, because that's the algorithm Sparta uses—next available sector. Since you are, in essence, writing to a "blank" drive, when you do a restore, the next sector will be the contiguous one.

I've only done this process once in five years and really haven't found it necessary (except after my major crash).

That's all for this month. Please do your part and write for *Current Notes*. Contact me via email or snail mail at one of the addresses in the masthead, if you want to contribute.

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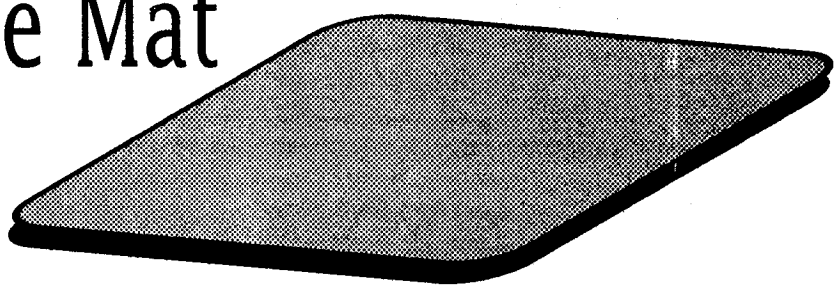

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ST Informer

GEnie® NOTES

by Wally Wilson

Spring is not too far around the corner; next thing you know, it will be April. With all that's been happening on the Atari ST and Jaguar RoundTable here on GEnie, I am being serious when I say I am having a rough time keeping up with the developments!

TraceTech, MissionWare, Gribnif, DMC, Anodyne, and many others have released new software . . . and more is on the way. In addition to all this new software being released, are all the questions, comments, and user tips for getting the most out of any new program. In this respect, the online experience really does rule the roost.

Along with other things being new and improved, there are the *M.O.S.T.* and *SARA* drivers for your Atari's CD–ROM drive. The *SARA* driver is completely new, and offers some exciting CD–ROM possibilities! There is a new version of *KA9Q* (TCP/IP FTP software for using the Internet) floating around out there that is supposed to have an incredible installation program included!

We've also had several outstanding Real Time Conferences with Jaguar developers, and are working hard on more RTC's for the future.

Without dragging this out too far, let's get on with the things we've got for you this time around the modem . . .

Hot Topics

by Terry Quinn

One of the hottest topics of late is *NVDI 3.0*, the *GDOS* replacement from Germany. *GDOS* replacement you say? Well, while *NVDI* will replace *GDOS* and *SpeedoGDOS*, it is really MUCH, MUCH more than that. Just read how impressed "Papa Hebert" was with it.

Note: GEnie retains the compilation rights to all messages in its bulletin boards including those which follow.

M.HEBERT1 ['Papa']

All,

My kindly neighborhood mail person came about an hour ago with my eagerly awaited copy of *NVDI-3*. Took only a few minutes to install—the supplied installation utility passes my "Dozing Bozo" test. A quick reboot and . . . Lo! My system is transformed. *NVDI-3* appears to give all the benefits of *Speedo 5.0c* (sans Postscript fonts) but with the stability of *Speedo 4.1*.

Fonts load super quick since the cache is built at bootup. *Speedo* fonts render as quickly as ever and Truetype fonts render in about half the time compared to *Speedo 5.0c*.

Font leading is slightly reduced compared to *Speedo*. It squeezes one extra line of 12 point type on a page with 1" margins all around. The leading, in fact, looks more like what it should be.

Metafile copies of text blocks work properly even when using intermediate point sizes (i.e. 30 points, etc.). A metafile copied text block will accept typeface changes but using a font with different width/height ratios results in a loss of kerning, and clipping on the right side can occur if the new face is wider than the original. There is still the characteristic slight reduction in size that has always occurred with metafile copies. It can be corrected by selecting the copy, then clicking on Correct Aspect Ratio under the Edit menu.

Handling of *GEM* vector graphics is much better than with *Speedo 5.0c*. My test files that work properly with *Speedo 4.1* but crash with *Speedo 5.0c* now work properly again with *NVDI-3*. The exception is *GEM* graphics with color fills, such as the demo files from *Kandinsky*, which print totally black. They might print out correctly with a color printer but I'm unable to confirm this yet.

When you click on Print be ready for a *big* surprise. *NVDI-3* dumps the page to the printer in what appears to be half the time compared to *Speedo*. I clocked one page at 22 seconds from hitting Print to my HP4L starting its paper feed.

I haven't checked whether *NVDI-3* corrects the bold attributes and elliptical object distortion that occurs in ST medium resolution but plan to look at it later today.

I am quite literally *blown away* by *NVDI-3's* performance. The CPX's are easy to use, it includes a printer driver builder similar to the one in *Papyrus*, but somewhat more comprehensive, and an **ASSIGN.SYS** editor that is a breeze to use. Oh, yes . . . it also includes an IMG driver so you can print your documents as IMG files.

COMPO has definitely got their work cut out for them–*NVDI-3* looks to be the standard setter for *GDOS* performance and compatibility.

'Papa'

*Not only does **NVDI** outdo **Speedo GDOS** but they have added additional printer support and other wonderful capabilities as well.*

M.HEBERT1 ['Papa']
All,

More *NVDI-3* info:

NVDI-3 corrects the bold attributes bug in ST medium res but does **not** correct the elliptical objects printout distortion (pie charts from the spreadsheet and such)–they still look OK on screen but print stretched vertically.

If you have a printer that supports true landscape mode printing, such as my HP4L, you can print IMG bitmaps in landscape mode. Using the *NVDI Printer Configuration CPX* you have the option of selecting Portrait or Landscape page orientation. Click on the Landscape icon, save the parameters, **then print from** *AtariWorks*. The IMG will be correctly oriented and positioned on the page. The nice thing about it is that you can do this without having to quit and reboot–it's a 'real time' change. Of course, you have to remember to switch back to portrait mode when you're finished. This will probably also work with the HP Deskjet series. I have no idea if it will work with Bubblejets, SLaMmers or dot matrix printers–you'll have to try it.

Oh, for those of you with color printers . . . yes, they are provided for. The Epson Stylus 360 and 720 dpi driver is included in the list of standard drivers! The printer driver builder will let you create custom color printer drivers with B/W, CMY and CMYK options–like for a Star SJ-148, HP560, Canon Color Printer or Fargo Primera!!

AtariWorks **will** import (X)IMG graphics but I'm not sure if it accepts all the bitplanes or just one. If it takes all of them **and** passes the color data through it may be possible to print color bitmap graphics, photos and the like using *NVDI-3* and a color printer. I'm not set up to try this out so I can't say whether it's possible or not.

More to come as I find things out . . .

'Papa'

*One significant characteristic of **NVDI 3** that "Papa" didn't mention is that it is also a system **accelerator** like **Warp 9** by the Codeheads. How good is it?*

T.HOPPER [Tom Hopper]

Just got my copy of *NVDI 3.01* from TOAD today! It's great! Easy to install, fast (though not quite so fast as *Warp9* when it comes to text), and compatible with everything I've tried so far, including *WINX*. It's nice to have *WINX* running **with** screen acceleration! It was well worth the *$70*.

Tom

Should you get it? Well, a post by Al Fasoldt says it all!

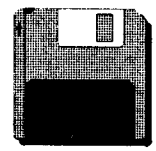
A.FASOLDT [Al Fasoldt]
Richie,

When I use *NVDI 3* with *Works*, I just tell *Works* to set the page size to the installed printer's specs, and all is well.

I must say *NVDI 3* makes *Works* a wonderful word processor. Freed from *Speedo* and its quirks, *Works* is what it should have been all along—an outstanding example of the art of *GEM* programming, and one that prints in a glorious fashion as well. I'm working in *Works* right now on the other system here, and have 132 fonts installed. I'm going through a few hundred other fonts in the meantime. It's a piece of cake with *NVDI 3*.

Glory, we have all gone to heaven.

Al

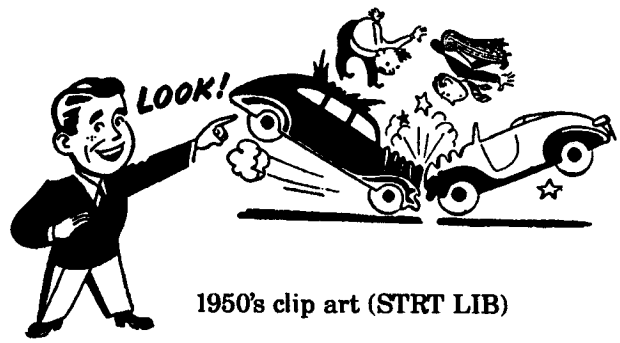


Atari RoundTable Library
by Gordon Meyer

Everyone knows that GEnie is the place to get the very latest shareware, freeware and public domain software. And **everyone** is right! But there are more than just programs in the ST RT Library. This month, let's take a quick look at few files that aren't **just-another-program**.

Clip Art from the 1950's

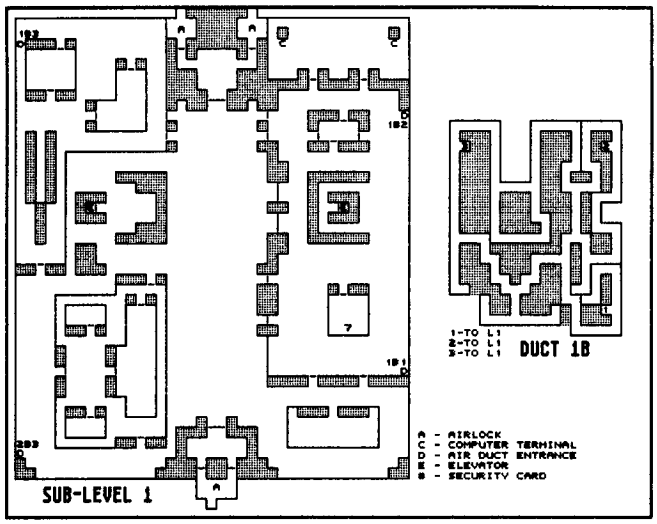
If you're looking for some clip art that is both unique and nostalgic, be sure to check out **CLIP50S.ZIP (#33864)** and **2CLIP50.ZIP (#33905)**. Each contain 13 or 16 IMG format pictures that have a distinctive look. These illustrations are so retro they're fresh! Both collections were uploaded by **C.SAGGAU**.



1950's clip art (STRT LIB)

Alien vs Predator Maps

Just the thing a wayward Marine, Alien, or Predator needs to master this incredible Jaguar game. These maps are detailed and easy to read. They're available as color GIFs, for viewing onscreen, or as monochrome GIFs for printing. There are six maps in



Alien vs. Predator Map (STRT LIB)

all, and both archives contain all the maps. Download **AVPMGIF.ZIP** (**#34488** uploaded by **J.BATES15**) for the monochrome files, or **AVP-GIF.ZIP** (**#34368** uploaded by **B.BEAUCHEA**) for the original color versions. (The map from the first level of *AvP* is shown in FIGURE XXX to whet your appetite. Happy hunting!)

By the way, we've set aside **Library section #42** exclusively for **Jaguar-related** information. Everything from screen shots to archived Bulletin Board discussions are located in this new section. GEnie is definitely the place to be if you're a Jaguarian.

Bulletin Board Archives

One of the most valuable resources for any Atarian is Library 13. That's the **Atari Archives** section and it's where you'll find archived messages from the Bulletin Board discussions and transcripts from all the formal RTCs. If you're looking for information about nearly anything Atari-related, or you're just looking for some entertaining reading, take a browse through this library. You'll find archives on everything from *Atari Works* to *Zoomracks*.

Around GEnie

The Stamps RoundTable

by Wally Wilson

The Stamp Collecting RoundTable, in their own words, is an on-line philatelic newspaper, with a very active letters to the editor section. It is an excellent place for news, information, opinions, and advice concerning stamps and stamp collecting, as well as coin and coin collecting. By the way, stamp collectors are known as philatelists, and coin/money collectors are known as numismatists. The general topic of stamp collecting is called philately, and the general topic of coin collecting known as numismatics. Armed with this knowledge, let's take a look at this section of GEnie...

The Stamp Collecting RT is made up of folks ranging from the very-experienced, to the totally inexperienced. They take a large amount of pride in the fact that the very-experienced folks are always ready and willing to help you out, and to help you learn more about stamp and coin collecting. Lloyd [L.DEVRIES], the Stamp Collecting RT Sysop, is a very nice guy, and I just finished a little impromptu Real Time Conference with him and Joe [J.COULBOURNE]. It is always nice to meet nice people, and I was pleasantly engaged in conversation with these folks directly after showing up in the RTC room at page 1520. ‹grin›

I've spent the last couple days checking out the Stamp Collecting RT, and have come up with a list of some very interesting Topics.

Recently, my grandfather passed away. He was a good man, and is already missed. Amongst some of the things he left me are some very nice coins from his coin collection. I never realized my grandfather collected coins; apparently, he has been doing this since arriving in America, from Ireland—way back when. Yes, some of these coins are quite old. I had basically forgotten all about the coins, especially since they are all nestled away in their own little area of my room.

As I was going through the Topics here, I noticed one that stood right out and called my name, "Hey, Wally! Check me out!" Right there in Category 2 is a Topic named, "Help for Heirs and Former Collectors," and yes, I'm going to have to check this out. I'm only sorry I didn't notice it before I really had to start writing this.

In the area of coin collecting, there are many things to know. I've read of coin collecting scams on unwitting consumers in the newspapers from time to time. Here you will find all the contacts you need to equip yourself with the right books on the subject, as well as some active discussions regarding just about every coin collecting subject you can think of. If you don't see it, talk to the Sysop and see about starting a Topic for discussion!

You will also find the American Numismatics Association has its own Topic here. The Topics I checked out covered U.S. Mint and Proof sets, silver dollars, addresses for coin collecting clubs, and medals. I was very surprised to find that tokens are also collected by people (I guess I'm just not of a "collecting" frame of mind–probably a genetic thing). Yessiree Bob, store tokens, civil war tokens, and tokens from hard times in our Nation's history are all being collected, and discussed in their own Topics in the Stamp Collecting RT.

Other areas of interest concern the history of stamps, the stories behind them, and postal history, in general. I noticed special Topics for early U.S. stamps, mid-20th century U.S. stamps, stamps from

foreign countries, and postal history. There is even a Topic named, "Story Behind the Stamp." A little reflection on this brings to mind the fact that much of our Nation's history is well-documented by these stamp historians, and that the stamps themselves are little snapshots of days gone by. I find it all very interesting.

There are also other areas catering to the actual act of collecting stamps. Is anyone out there using stamps as an investment? You bet there are, and there's a place here to talk about it. Shared resources in this respect are pretty formidable, especially when you add a computer and a modem. Talk about some of the newer tools of philately, and you will also find a Topic discussing this, as well as digitized stamps, scams and shady deals, stamp exhibitions, and stamp identification and the technical matters of actual stamp collecting. It appears to me that stamp collecting is much bigger than I'd originally thought! It is certainly more technical than I've ever allowed myself to believe, and just reading some of the posts here makes me feel as though I'm surrounded by Stamp-Collecting Zen Masters.

The Stamp Collecting RT also has a software library that offers software specific to stamp and coin collecting, informational files, special deals, FAQ files (frequently asked question files), and many other things.

Several stamp collecting societies are represented online, and have discussion areas right here in the Stamp Collecting RT:

American Philatelic Society
American First Day Cover Society
American Topical Association
Philatelic Computing Study Group
Junior Philatelists of America
Virtual Stamp Club on GEnie

The layout and feel of the Stamp Collecting RoundTable is definitely that of a club-atmosphere. They have club meetings in their Real Time Conference rooms on the 2nd and 4th Tuesdays of each month, at 9:30pm EST. They will be trying out several different meeting times for the 2nd and 4th Tuesday scheme, and it looks like there will be meetings on these days at 8:00pm EST, 9:30pm EST, and 11:00pm EST!

They also hold informational and educational seminars in their RTC rooms. I was told they have enough material for these seminars to last them a couple months. A quote from the press release I received from Lloyd:

"The Stamp Collecting RoundTable will be offering seminars on basic philately on Wednesday evenings beginning on January 4th. They will be hosted by noted Virginia philatelist Joseph C. Coulbourne, and will be open to any GEnie subscriber, no matter what sort of computer they use, at no additional charge.

The subjects will include:

What Is My Stamp Worth?
Which Country/topic Should I Collect?
What Stamp Albums Should I Buy?
How Do I Buy/Sell/Trade Stamps?
The Tools of Stamp Collecting
Why Should I Join a Stamp Club or National Society?

Each seminar will begin at 9:30pm EST (to allow West Coast participants time to return home after work) and run at least an hour."

This is a well-rounded area. Even such items as magazines, newsletters, and books are covered in their own discussion Topics. There are places to buy, sell, and trade stamps, as well as coins, and you can also get bargains on books and publications related to stamp and coin collecting right here! I had never thought about a stamp CD ROM, but there is a Topic in Category 20–The Philatelic Press, called "CD ROM's for Philately." Yes, it looks like the quiet world of stamp collecting is definitely keeping up with technology, and putting it to good use. They even have On-Line Auctions for coin collectors!

So, if you happen to be in the GEnie neighborhood, type "M1520;1" to check out the Stamp Collecting RoundTable. I think it will definitely open your eyes to what is normally seen as a quiet pursuit.

GEnie Sign-Up

To sign up for your very own GEnie account, follow these simple steps:

1. Set your communications software for half duplex (local echo), at 300, 1200, or 2400 baud.
2. Dial toll free: 1-800-638-8369 (in Canada call 1-800-387-8330). Upon connection, enter **HHH**.
3. At the **U#=** prompt, enter **XTX99437,GENIE** and then press [Return]
4. Have a major credit card ready. In the U.S. you may also use your checking account number.

Atari in the STicks

Henry K. van Eyken

PALMTOPS AT OUR FINGERTIPS:

Stellar Performance

.. h o m e ..
– E.T.

Hewlett Packard's 200LX is away beyond dreams come true–mine and, it so transpired, HP's dreams also. This pocket computer runs on an 80C186 chip with MS DOS-5 held together with a bevy of applications in three megs of ROM. An application manager presents a simple, iconized interface with one icon for direct access to DOS. Programs added by the user may participate in multitasking as well by first rendering them "system compliant."

The built-in applications include an editor and, separate thereof, a notetaker. Then there are a calculator *with equation solver, Lotus 1-2-3* (v. 2.2), a junior version of the finance tracker *Quicken*, a database system of the card-box variety, a phonebook, a personal scheduler just loaded with useful bells and whistles, and a variety of communication programs. These applications come with drop-down menus and labelled function keys. As mentioned, one may add at will to the built-in programs. Among mine, for example, you'll find *Excalc*, a calculator-cum-solver made by former long-time *Current Notes* columnist, Andrzej Wrotniak.

Semper Fidelis?

If, literally, you want something to show for money earmarked for portable computing, better buy a laptop. But if you wish to go for something less obtrusive and, yet, a highly capable computing companion, don't be discouraged then by the 200LX's rather substantial price.[1] The instrument measures 6.3 x 3.4 x 1 in. and weighs 11 ounces, batteries included. Within this small package you'll find a CGA-compatible liquid crystal display screen of 640 x 200 pixels that accommodates a full complement of 80 columns by 25 lines of text. Best of all, this computer is supplied and supported by a solid, technologically savvy firm, something that no longer can be said for Atari's apparently dead-ended Portfolio.[2]

Of course, today's palmtops differ from laptops in other aspects than size. Most obviously so by not offering a color option. And, most painfully, by their severely limited and dreadfully expensive storage capacity. Nevertheless, they, and in particular the HP 200LX, herald a magnificent rebirth of that sort of on-the-person computing that goes beyond mere calculating.

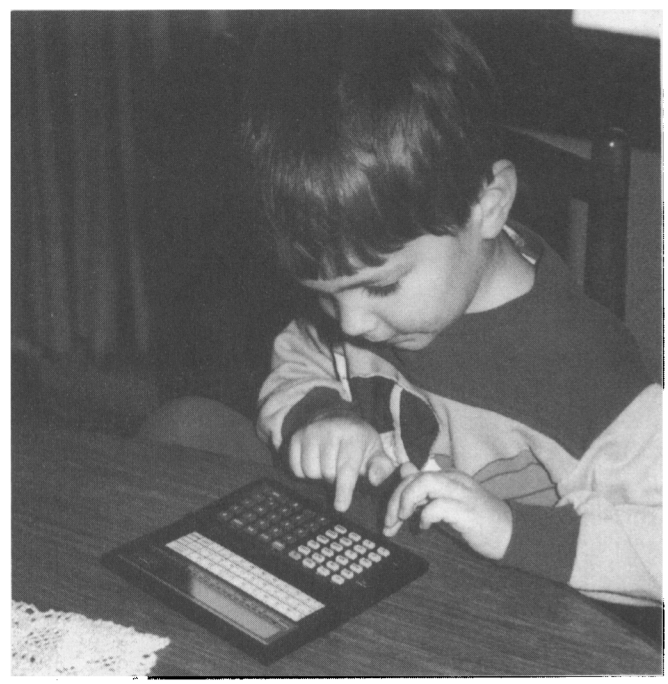
Rekindled Expectations

From the moment I acquired my first pocket computer, a Radio Shack 500-byte PC4, back in, when was it? 1986?, I have come to regard the development of on-the-person computing a social necessity. Let me explain in, perhaps, too few words.

---

1. First computer in the LX series was the 95LX, then came the 100LX followed by the 200LX. Though similar in appearance, the 100LX differs substantially from the 95LX, but there is no big jump going from the 100LX to the 200LX. Substantial savings may be had by buying a used 100LX for getting one's feet wet. Favorable upgrading arrangements exist. Though palmtops are cheaper than laptops, any added memory comes in the form of expensive flashcards.

2. The first IBM-PC compatible pocket computer was the Pocket PC from Distributed Information Processing (DIP) Ltd in the U.K. Outside the U.K. it is better known as the *Portfolio*. Impressive specs notwithstanding, the Atari ST Computer Club Nederland was advertising brand-new Portfolios for Hfl. 79 in the November issue of *ACN ST Nieuws*. That puts the faith in the Portfolio's future at about $40 U.S.



Grandson Eric tries out the author's "new" Radio Shack pocket computer back in the mid '80s. Eric is now 12 years old.

For 5.7 billion people to safely share this planet, a harmony that can only come from a rate of achieving mutual understanding and cooperation vastly beyond what humans today seem to be capable of is demanded. We are hampered by that mother of all social barriers: a lack of sufficient agreement about what is good for all. In this we are up against walls of blind convictions that span a spectrum from harmless idiosyncrasies to unadulterated fanatism.

Like many of us, I am alarmed about the future of humankind, or, closer to home and probably more to the point, the future of my family. Experience as an educator has given no relief because, fine exceptions notwithstanding, I found short-term expediency and self-interest to reign supreme also among those in our "enlightened society" whose professional duties concern preparing young people for a longer-term future. Or to put it bluntly, I found that student interests are readily sacrificed for faculty interests.

To my mind, a solution to the larger problem, if there *is* a solution, can only be found by supplementing the democratization of people's say with that of information *well rounded by the impartial and sufficiently thorough interpretation of information.* As for the latter, we ought welcome permanently accessible enhancement of neural brains for improving speed and quality of personal assessments that bear on communal concerns.[3] Thus, I tend to believe that on-the-person computing is more than a boon to individuals and their careers; it holds out a promise of more effective, participatory citizenship.

Given these sentiments, then, the reader will understand that I felt a sense of dismay during those dark ages of pocket computing, the years 1988 to 1990, roughly. Then, pocket computers were degraded, at least on the North American market, to mere "organizers." [4]

Popular Aversions

A fundamental aversion to true pocket computing by even the well educated is a need for acquiring a level of computency that includes some degree of programming skill. That's why I tried to demonstrate some of the usefulness of elementary programming in previous columns. Other major excuses for not more vigorously pursuing the use of pocket computers are, I believe, their tiny keyboards and, perhaps, their small screens so bland by comparison with the desktops'.

Early pocket computers displayed, at best, all of two lines of text. Clearly, those were not meant for extensive writing, but nevertheless, even those devices could easily have been developed into excellent educational tools, both to deepen mathematical insight and for acquiring basic skills in machine computation.[5] This is especially so because they were cheap (under a hundred bucks) at a time that schools could hardly afford buying desktops.

Change of Heart

I had once occasion to write Hewlett Packard about pocket computers and their keyboard. The reply of March 21, 1988 was not uplifting,

> "... handheld computers are severely limited by the size of their keyboard and screen. It is too gruesome an activity to do spreadsheets when all you can see are one or two cells at a time."

The letter went then on to note that

> "the HP-71B was the last handheld computer HP introduced. That was in 1984."

This clearly implied that the company was in no mood for further forays into the domain of pocket computers. Calculators capable of doing symbolic algebra, like the HP 28S, were where it was at. Extolled a university dean,[6]

> "Just the existence of this calculator is an incredible thing ... On most examinations that are now given in calculus, that calculator could get a B, or at worst a C+. It's a real opportunity, but it means that the calculus course will have to change."

Whether or not the HP 28S ever did change that course I don't know, but I do feel that if calculators should change the educational smorgasbord, then even more so should pocket computers. After all, calculators essentially only interpret numerical interactions, whereas computers help make sense of numerical, as well as non-numerical, information.

But something was brewing in Hewlett Packard's labs, away from the front offices. It was in that very year of 1988 that HP engineers were dreaming up a handheld "information manager" – a project that subsequently went under a succession of code names that

---

3. a. v.E., "Fleabyte Fundamentals: Promoting More Meaningful Learning." *J.Coll.Science Teaching*, Nov.'89, p.70. b. v.E., "Orality, Literacy, Computency," *Current Notes*, Sept.'93 , p.32.

4. Somewhat exceptional was the Psion Organizer because it did contain, as does the current model, the Psion Series 3A, a nice, succinct programming language. Being proprietary, the arrangement probably isolates these computers too much for long-term comfort.

5. v.E., "The Little Engine That Could've." *Current Notes*, April '94, p.50.

6. James Gleick, "The Handheld Calculus." *The New York Times*, Nov.'88.

playful Atarians can identify with: *Cheetah, Ocelot, Jaguar.*

Hewlett Packard brass initially wouldn't go for it; not, that is, until the Lotus Corp. expressed a desire to jointly develop a "portable 1-2-3 machine." HP, then, would focus on the hardware and calculator aspects, whereas Lotus would look after "Personal Information Management," communications, and, of course, the *1-2-3* software. That was in September of 1989.

Things went well and a subsequent project, *Cougar*, produced the HP 100LX, a major advance in ease of use. I don't know what feline came next, but we now have the HP 200LX, which may be had with either one or two megs of RAM.[7] Thus, Hewlett Packard's skills in engineering and commercial development have given us a series of instruments whose usefulness is on the ascent and may well approach that old dream of Allan Kay, Xerox Corp.'s *Dynabook*, a

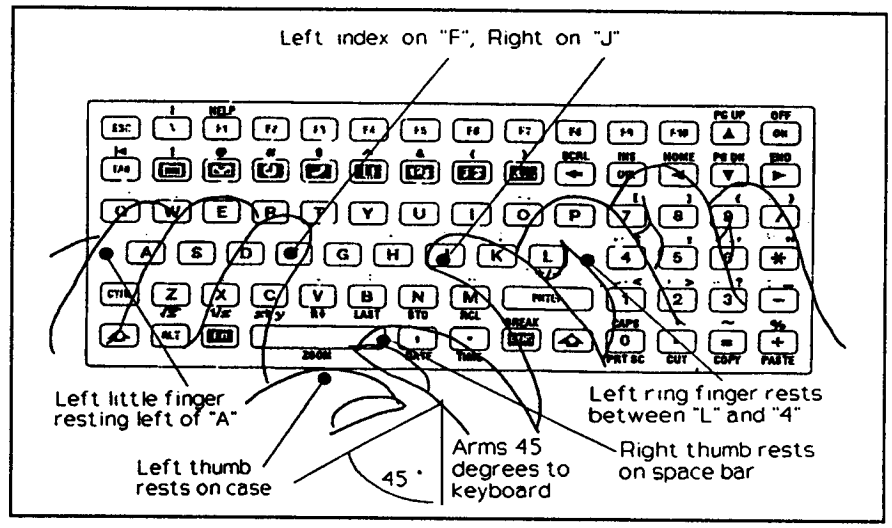


Figure 1. Touch–typing on a Palmtop. Michael Walsh advocates this positioning of one's hands.

> "personal dynamic medium ... owned by everyone and could have the power to handle virtually all of its owner's information needs. It would respond to questions, it would have enough capacity to store anything the owner would like to remember, it would have high quality video and audio output, and it would have enough power to respond instantly."[8]

Key Issues

Let's contemplate the weaker points of today's pocket computers, the points that need special attention. The most scathing commentary targets their tiny keyboards, even while those on handheld calculators are perfectly respectable. I imagine that this contradiction arises from calculators requiring only a few keystrokes for furnishing a looked-for result. Working with computer programs, typically, takes longer to integrate into our daily routines. This demands more extensive input as well as attention to the locations on the monitor where pieces of information are to be entered.

The problem is, in part, addressed by using function keys and macros. For remembering those, and for helping make the typically quick-and-dirty home-made programs, Hewlett Packard or a third-party developer could probably quite easily allow for faster programming by taking a leaf from yesteryear's pocket computers in making available slotted keyboard overlays that take ink. Then keystrokes may be assigned the most frequently used commands in a given programming language.

For touch-typists, a more general solution is offered by Michael Walsh. He advocates users adopt a typing technique rooted in a *home-row* key pattern appropriate to small keyboards–see figure 1.[9] Taking a somewhat loftier view, it is good to remind ourselves that an increased use of pocket computers justifies experimentation toward finding an optimum mode of key design and use. In fact, an organizer was once brought to market, the Microwriter, that had two keyboards; a regular QWERTY plus a set of five unmarked keys, one to a finger. It has been reported that "by pressing the keys in various combinations, one can learn (bafflingly quickly) to type almost as fast as on a full keyboard."[10]

Window Dressing

Eighty columns across a screen less than five inches wide makes for small type; consequently, a good chunk of the solution has been found in allowing a choice of 80, 64, or 40 columns. Another part of the

---

7. Everett Kaser, "The Evolution of the HP Palmtops." *The HP Palmtop Paper*, Nov./Dec.'93, p.14.

8. A. Kay and A. Goldberg, "Personal Dynamic Media." *Computer*, 10, 31-41. (Quoted in Tim O'Shea and John Self, *Learning and Teaching with Computers: Artificial Intelligence in Education*, p.200. Prentice-Hall, 1983.)

9. Michael Walsh, "Touch Typing on the HP Palmtop." *The HP Palmtop Paper*, Nov./Dec.'94, p.40.

10. "A Computer in Every Hand." *The Economist*, Nov. 26, '88, p.76.

solution came from a user: a sans-serifs replacement font–figure 2.[11] This article is written with my HP's built-in editor. It automatically comes up 64-columns, which is in close accord with the usual line length of typed text. Sans-serifs makes this choice eminently legible. Although my eyes aren't the best, I can, if pressed, get along reasonably well even with 80-column sans-serifs. Fact is that I am using 80-column text for studying a language, and that is putting its use to a pretty rigorous, real-world test.

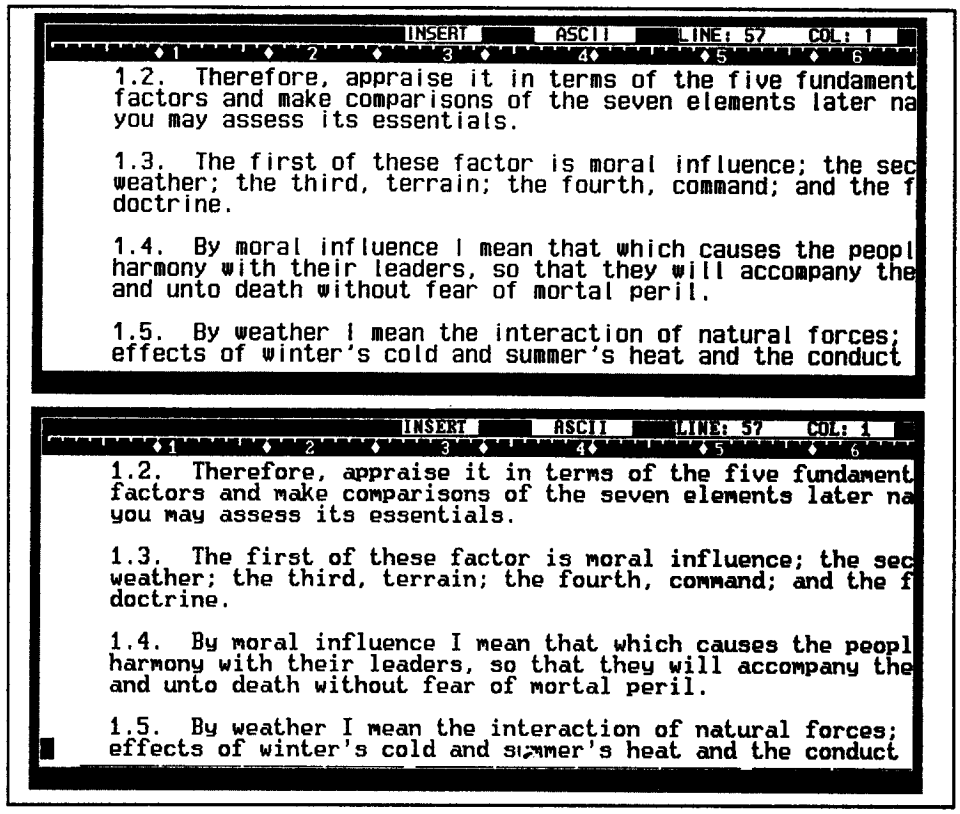


Figure 2. Improving legibility. Top: The Palmtop's original font. Bottom: Van der Ham's Helvetica.

Originally, I bought, from Transparent Language, a Mac version of the course so I could run it under Spectre on my STe.[12] Then, wishing not to interrupt my study during a stay away from home, I obtained a DOS version for the pocket computer. (I also copied the spoken text from regular cassette tapes to tiny cassettes for my AIWA micro cassette recorder.) I found additional compensation for the small typeface in not having to sit up straight in front of a monitor. Moreover, I can readily switch back and forth between the language screen and a copy of the main text put on an editor for comfortably making personal notes on the subject being studied.

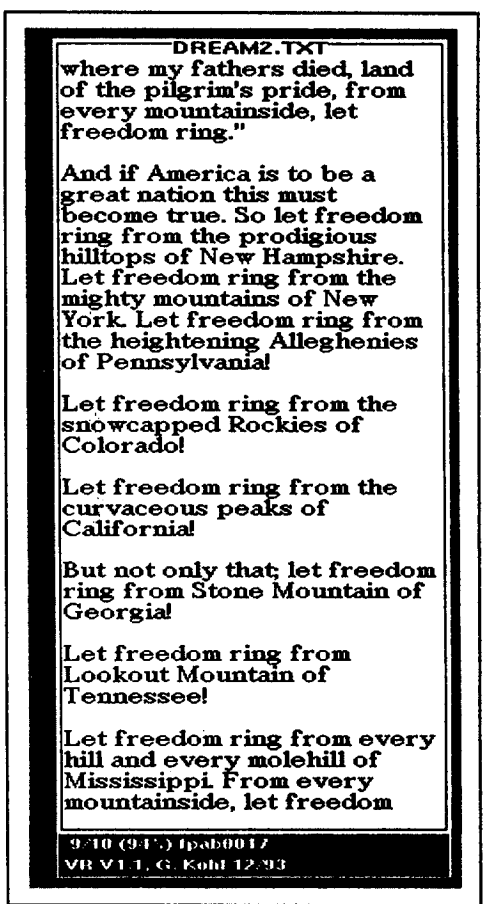


Figure 3. More like reading a book. *Vertical Reading* program turns text.

Others found a solution to reading a palmtop in a program that lets one turn the computer 90 degrees–a solution known as *vertical reader* (see figure 3). The vertical reader (a shareware application that also permits a choice of fonts and point sizes) entered the world of pocket computing with products from project Gutenberg. Gutenberg has placed on-line some 200 *etexts* (electronic texts) that include literature and reference materials. The 200th book is the first volume of Encyclopedia Britannica. Most of the work (text entry, proofing, copyright research, hardware, software, etc.) is volunteered by people around the world.

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11. Ruud van der Ham of Holland put in the HPhand forum of CompuServe a font based on the original Helvetica font to be run as a TSR by means of the DOS equivalent of the Atari "autofolder." He created this font with a shareware program, also on CIS, called *FLC* (font loader and compiler).

12. Transparent Language, 22 Proctor Hill Rd, PO Box 575, Hollis, NH 03049, USA, offers courses in Spanish, French, German, Italian, Latin, and Russian.

As an enjoyable experiment I reread, after half a century, Jules Verne's "Journey to the Center of the Earth." I came to prefer reading from a viewer or, better still, an editor and ended up choosing an Emac because it offers an uncluttered screen interface together with an opportunity to make notes on what is read.[13] The experience ejected the irony from that overworked saw, "Curled up with a good laptop lately?" I, for one, have added to my compact library of etexts.[14]

Reading text on-screen permits exploring superior modes of studying. Besides making note-taking more convenient, it also facilitates their organization and referencing. Furthermore, it allows students to remove from a copy of a given text those parts he does not wish to retain and thereby cut down on distraction and wasted time and temper. Better still, I should think, etextual information lends itself, in principle, well to updating, something vital in times of accelerating change and, hence, multiplying confusion about the veracity of what we think we know to be true. I foresee that a pocket computer will thus become a valuable, if not an indispensable, aid in lifelong education.

Pioneers of Progress

Let's not go overboard. Pocket computers do not measure up to their larger siblings in every respect. But once we are convinced of their valuable potential, the task at hand is to gain experience in using them and improve on perceived shortcomings. The present generation of pocket computers (and notably the HP's 100LX and 200LX models) give us an excellent start.

Consider an experiment by electronics engineer Harry Konstas. He decided to put things to the test by just living with small physical size:

> "... many people viewed my Palmtop as little more than an expensive toy .... In order to prove to others that very serious work can be done on the HP100LX, I decided to design one of my projects from start to finish, using only the HP100LX."

The quote comes from a 1993 letter to the editor of *The HP Palmtop Paper*.[15] See the accompanying box for a condensed version.

Although the design of some of the built-in applications seems to be primarily targeted for business people on the move, the HP Palmtops come with a full complement of math functions, notably as part and parcel of the *1-2-3* spreadsheet program. In the calculator, they are rather demurely tucked away–not to scare off non-technical road warriors, I guess. Nevertheless, these functions make the instrument popular with scientists.

One programming language advertised for use on the HP Palmtops is Forth, which I understand to be a darling of astrophysicists. And a surprising amount of software, mostly reference material, is available for the medical profession and health-conscious individuals.

Reports have it that the HP Palmtops have been well received on the Western side of the Pacific. Item:

> "Samsung Life Insurance purchases 12,100 HP 95LX's for sales force."

Items:

> "ETen ... program provides for input and display of Chinese characters in the 95LX and allows users to run Chinese applications within ETen."

> "Chinese version of the HP 95LX ... is reportedly selling briskly in Taiwan and other countries with large Chinese populations."

Japanese Palmtop owners are especially enthusiastic and inventive. They have come up with a modification to double the clock speed from 8 to 16 MHz. And among their software one finds one that lets the user jump from a written address to a highlighted spot on a city map. Another program runs movies (very short). Under development: backlighting for the Palmtop's display (the downside of which will be, I imagine, increased battery drain). NIFTY-Serve, the Japanese counterpart of CompuServe has the fastest growing population of Palmtop users.[16]

Rendering Unto Caesar

Many softwares have objectives best met by pocket computers. Who wants to go consult his desktop for a phone number or someone's birthday? What sense is there in maintaining an out-of-pocket cash account on an ST or Falcon? Aren't such items naturals for recording in something held on the person–be it a notebook or a pocket computer? And what about culinary recipes?

I am not advocating the wholesale displacement of a pocket agenda or card file by a computer. Let's agree that the relative merits and costs of these tools

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13. Craig Finseth, *Freyja*. CIS GO HPHAND 7, Library 7:FREYJA.ZIP.

14. A listing of etexts is found on CIS: GO HPHAND 7, Library 11: GUTNBE.ZIP.

15. Harry Konstas, "Developing Microprocessor Devices on the 100LX." *The HP Palmtop Paper*, Nov./Dec. '93, p.4.

16. Hal Goldstein, "Go East Young Man ... Go East. "*The HP Palmtop Paper*, Nov./Dec."94, p.7

must be evaluated for individual tasks. Their parallel use may well make sense.

Neither am I advocating the complete replacement of a desktop or a laptop computer by a pocket computer. Text preparation for printing, graphics and sound, and such professional applications as DTP and CAD clearly are no fare for pocket computers–although one may momentarily be surprised to learn that a mouse may be attached to a palmtop for drawing or wordprocessing.

The primary use of pocket computers would be for quickly gathering, filtering, storing, arranging, and evaluating information bearing on all aspects of an individual's life; and autonomously bringing to the user's attention information that is urgently needed. This will lead to a continuous bonding of electronic and neural minds as the pocket computer becomes a companion for life. Thus it is that it ought to play a large role in both formal and lifelong education.[3,5,17]

Where the pocket computer still falls painfully short is the small capacity and high cost of data storage. With file compression, one may today stretch storage to 80 K at a flashcard cost of about $1500 U.S. Clearly, this makes one rely on one's desktop for intensive computing runs and access to hard drive storage. But then again, cost of the PCMCIA cards are estimated to halve each year and their storage capacity may well be at 500 Meg within three years.[18]

Although the cost of HP Palmtops still precludes their use in schools, things may change rapidly. One educator expressed his hope and expectation some 15 years go,

> "... once a commercial impetus is given to their development, the production lines will roll [pocket computers] off, by the million and then by the billion, and each unit will be shortly as cheap as today's calculators.... They cost little more than the raw materials of which they are made, and they have the great advantage of being extremely reliable.[19]

Hopes Pinned On 6

Road warriors, by and large, view their palmtops as computers away from the home computer. Upon return to the office (or by line or radio link) they may reconcile data held in the office computer with that held in their palmtops. For example, the 200LX contains a pocket *Quicken*. Data files may be exchanged between it and *Quicken's* desktop version.

Hewlett Packard offers a connectivity pack for purposes such as this. It permits split-screen operation on both master (home PC) and slave (Palmtop) that lets one view the file menus on each. This eases reconciliation of data stored in the two systems. The problem is that those packs are only available for PC compatibles and for Macs. Atarians are ignored. Not even PC emulation with a SuperCharger offers a solution. SuperCharger's manual bluntly states that the Atari serial port is one line short of full compatibility: there is no signal "Data Set Ready" (DSR, pin 6) needed by some communication programs for synchronization.[20]

Designing Microprocessor Devices on the 100LX

(From a letter by Harry Konstas, CIS 72540,620)

In order to prove to others that very serious work can be done on the HP 100LX, I decided to design one of my projects from start to finish, using *only* the HP 100LX.

I copied an old copy of the *OrCad* electronics drafting software to my 10-MB flash card. I also copied my favorite editor (*QEDIT*), two assemblers (8088 and 68705), EPROM programming software, a couple of my software libraries, and all the technical information I would need for all the chips I was going to use for my project....

First, I wrote an overview of my project. Then I started designing the software for the microprocessors used in my project. At the same time I was using *OrCad* and designed the schematic diagrams.

I finished this first part of the project in a little over a month and then proceeded with the PC board design. (The PC board is the cardboard where the electronic components are mounted.) The 100LX screen seemed a bit small for drafting PCB's but I soon forgot the small screen and keyboard.

Finally, I programmed the EPROMs (again with the HP 100LX), soldered the components on the PC board and tested the product for the first time.

After two months of debugging and other hard work, I finally had a finished prototype ready for production–*completely* designed on my 100LX.

I couldn't have completed the project any faster on a desktop computer. With a desktop computer I'm stuck in the same place all day long. With the HP Palmtop, my work is with me wherever I go.

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17. v.E., "Fleabyte Fundamentals: Their Spirit and Their Substance." *Current Notes*, May '94, p.52.

18. SunDisk and NEC are developing technology that will lead to 500-meg flashcards.

19. C. Evans, *The Mighty Micro*. Gollancz. London. (Quoted in: Tim O'Shea and John Self, *Learning and Teaching with Computers: Artificial Intelligence in Education*. Prentice-Hall, 1983.

20. *SuperCharger User Manual*, v. 1.4, p.1/27.

What does work satisfactorily, for the time being, is single-file transfers at the ST's maximum setting of 19200 baud. One likes to do better, though. Maybe a reader can point the way.

Parallel Processing

Cheating in our schools has become commonplace to the point of being respectable preparation of life in a real world. But how are educators to judge student proficiency from exams written by people seated elbow to elbow on our educational production lines? One approach is to administer different tests to different students.

I foresee that, eventually, students will be educated together with their on-the-person computers and, of course, that they will be examined as teams.[21] An examiner might then simply beam different problem sets into different pocket computers. The responses will be radioed back for instantaneous marking and grading, thereby finally making the dreams of educational psychologists come true.

21. v.E., "Changing Minds." *Current Notes*, Oct. '93, p.20.

The LX series of Palmtops have, besides other ports, an infrared port for data communication between computers or between computer and printer. The effective radiation distance is still short and, as serial ports go, slow. But the technology is developing, and foreseeing that exams will be beamed in and out seems realistic enough.

And when that golden age of on-the-person computing is upon us, we well may witness people engaged in gossip or trading social pleasantries over a stiff scotch while their electronic companions soberly spar in serious debate.

Who says one can't do two things at once?

Pulex vobiscum

Acknowledgement

Thanks to *The HP Palmtop Paper* for permission to reproduce illustrations and text from H. Konstas' letter to the editor.

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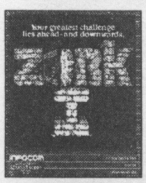

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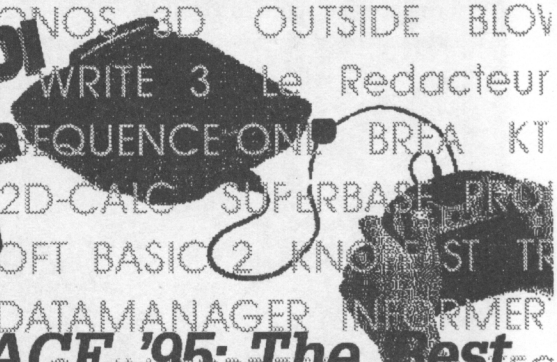

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Stochastic Screening and the October Update to Calamus SL

Running Out of Ram by David Barkin

Thanksgiving Day. My dog smiling happily as we both contemplate my famed gourmet dish, Louisiana unspiced blackened turkey. My dog will wind up with most of this mouth-watering delight. While I examine the take out menu of various local restaurants, I can only hope he gets stochastic screening. Yes, stochastic screening, either a new kind of stomach virus or the latest module from DMC. It is available as an option, along with the new October upgrade of *Calamus SL*. This upgrade adds some new features and improved performance and speed to *Calamus*.

The main additions are the activation of Spot Color, improved color handling, including a color picker (a color picker is a visible rainbow of color; clicking the mouse on a color selects it), as well as the conventional ways of choosing color. There are quite a few other minor additions and improvements. *SL* now rivals *Calamus 1.09* in speed. While the previous version of *Calamus* was a very solid and bug free program, this new upgrade also repairs some of the minor problems with the modules. The Bridge module now exports color TIF files correctly. The Raster Generator has been im-

Figure 1. Joe and I are keeping our fingers crossed on the output of these images. Normally these images are printed at 300 DPI on an Atari laser printer. In this case the images are hardcopy from my 600 dpi HP IV. The original TIF has been enlarged 3 times. Here is where we test the camera of CN's printer. In the detail from the larger image. You should be able to see People! Who are these people? Beats me.

proved. The Color Separation Module, which used to be optional, is now standard. The new Document Converter module will import *Calamus* files from all previous versions of *Calamus*, including the new version of *Calamus for Windows NT*. The upgrade, which includes upgrading your existing modules, is all of $50. A definite bargain for such a powerful upgrade.

Before describing the newly available modules, let me point out that this new upgrade is not compatible with modules, drivers and files of previous *Calamus* versions. The new document converter flawlessly imports old CDK files, but you will not be able to use the new modules or drivers unless you have the new version of *Calamus*. It took me about an hour to set up my new upgrade. CRI files (the settings to screen photographic images) had to be redone. Control lines, to set contrast, had to be gone over, etc. This was not a problem. This article will mainly be a discussion of the new module for stochastic screening, but there are two additional modules that deserve mention.

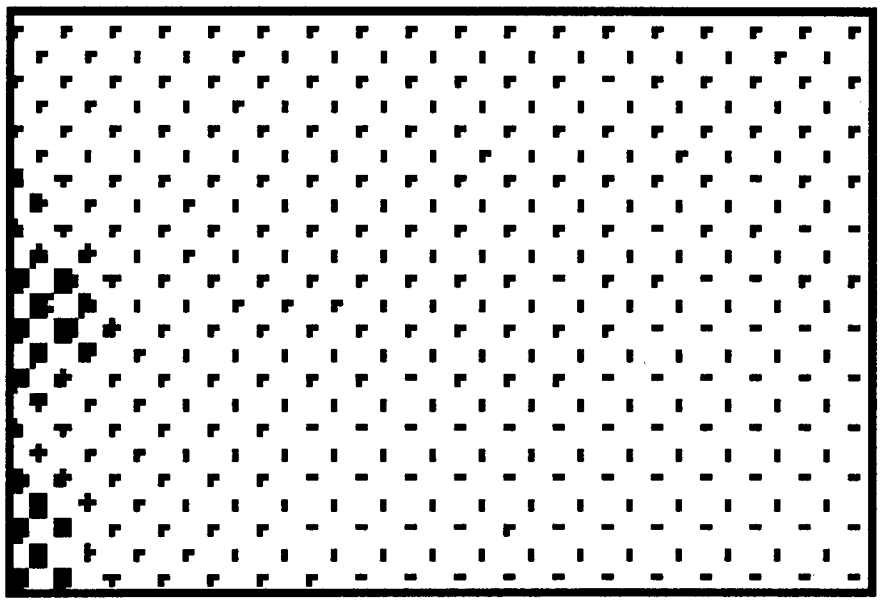

Figure 2. Above is a screen shot from the sky of the 100 LPI setting, set for 600 dpi output. The dot pattern (not the image) has been enlarged 18 times. This shows the actual assigned printer points, which is to say the actual pattern of dots the printer will be using.

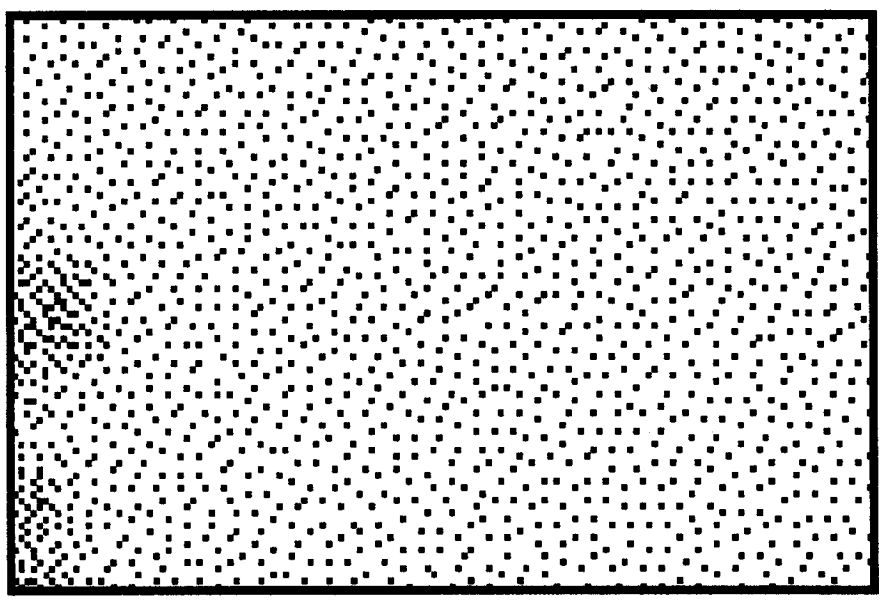

Figure 3. Above is a screen shot from the sky of the Star Screened image. This has been enlarged (the dot pattern) 18 times. Like figure 2, this image shows the actual assigned printer points, which is to say the actual pattern of dots the printer will be using. Even at this magnification the dots are incredibly tight.

Pagetool

This module, which is being sold for $50, allows the creation of user definable size, thumb nail images of your *Calamus* pages. These thumbnails are visible on screen when the module is activated. Once visible, you can move the thumb nails around with your mouse. You can move one page or a group of pages. You can add or delete pages, while examining the entire document. I was a little skeptical of this module. The builtin page manipulation tools of *Calamus* are sophisticated and easy to use. But after acquiring this module, my biggest complaint was "Why didn't you guys have it earlier?" A customer of mine gave me a 40-page report to lay out and she kept changing the order of the pages. She was constantly doing this and I was constantly getting lost as to where things were going. Running Pagetool while working on this document absolutely eliminates that problem. If you're often creating multi-page documents, this module is a must have.

Blend

This module allows the creation of grayscale or color fountains out of any raster frame. These fountains can be vertical or horizontal or even circular. I have not acquired this module, but have seen various downloads of its capabilities. I believe that the same designs can be accomplished in *Outline III*, *Das Vector* and the *Line Art Module*. The advantage of owning the Blend module is that these are raster designs, not vector images. Both raster and vector have ad-

vantages and disadvantages. Of course, another factor to consider is that, if you own the Bridge module, different frame types can be converted from Vector to Raster and back again. This module also sells for $50.

FM Modulation or Stochastic Screening

FM Modulation (also called Stochastic Screening) is a technology that was invented about a year ago. It can be seen under various trade names, such as, Crystal Screening, Star Screening and others. It is a new method of screening images to produce optimum results on a printer.

Briefly, conventional screening involves the creation of cells. Each cell is made up of individual printer points, which, in turn, define an area of gray (or color). A row of these cells corresponds to the term "line." Thus, if you have a photo screened at 100 lpi (lines per inch), this means 100 lines of these cells per inch. The user controls this process, assuming you have the software to do it, and creates screens to print out your images. Once again, by the word screen, I am referring to the number of cells. For example, if your printer is capable of 600 DPI, then you can create 100 rows of cells, each consisting of six printer points. The result will be a very sharp image, but with little variation in gray. If you created 80 cells, each cell could contain 8 printer points. Since these can be arranged in 64 different ways, you could have 64 levels of gray. Screening, unless your printer is a 2400 DPI printer, is always a compromise between clarity of the image and sharpness of the image. It takes a cell with 16 by 16 printer points to achieve 256 levels of gray. (16 times 16 equals 256, something a 600 dpi printer is incapable of.)

Stochastic Screening operates on another level entirely. Since conventional screening treats entire cells as printer areas, the individual dots tend to merge on the page. Sometimes you want the individual dots to be larger. Xerox machines are not able to copy photographs because they arbitrarily assign either a black or white dot to an area, resulting in high contrast copies. The same result might occur with 100 lpi laser output. The xerox machine is incapable of seeing the individual points. Thus, roughly 65 LPI or 65 cells per inch (or less) is the way to screen images for xerox output. Stochastic Screening disregards the entire concept of cells. The image is divided up to maximize the number of printer points. An image stochastically screened at 600 DPI would, in fact, consist of 600 areas (white and black points) distributed in a semi-random way according to the level of gray. The module examines each one of these areas and assigns a black or white dot. This is determined by a mathamatical algorithm which determines the gray level (or color), makes a decision and then goes to the next area. The module takes the already assigned levels into consideration for its next decision. The user can change this algorithm (see figure 5) and further control the results.

What does this mean? In figure 1 an image is screened in the conventional manner at 100 LPI and then stochastically screened to achieve the same result. Figures 2 and 3 show a detail of the same image, enlarged 18 times. As can be seen, the density of dots is enormously multiplied with Stochastic Screening. What are the implications of this method of screening?

Problems of FM Modulation

The following paragraphs are going to describe the problems with this technology. There are solutions to each and every one of them. This technology is so new that all who use it are on the cutting edge. With the home printer, and here I'm including up to 600 dpi laser printers, dot gain is the number one problem. Since printed dots tend to spread a little after they reach the page, stochastically screened images tend to be much blacker then you expected from their appearance on the screen. What looks crystal clear on your monitor will be much too dark once printed. Another drawback is that, once an image has been stochastically screened, it is transformed into a monochrome image, similar to conventional mono .IMG files. This means that they can no longer be resized as with a conventional multi-colored .TIF file. Another large problem is memory limitation. *Calamus* handles multi-bit files in an awesome way. If you expand a .TIF file to full page size, the program is able to allocate memory as if the image was its original size. In short, an 800K file uses 800K no matter what screen size you make it. But when such an image is processed by the *Star Screening* module, the image is processed according to the screen size of the image, not its original RAM. In translation, this means you need much much memory to process an image. 8 meg machines will find that anything much over 3 by 5 will give you the message "not enough memory for this operation." This assumes that screening is done at 600 dpi. (600 x 600 x 3 x 5 equals 5,400,000 bytes. If you screen at 300 dpi then you can deal with much larger images. With my 30 meg machine, stripping down all the unused modules from *Calamus*, disabling unnecessary accessory programs, taking off my clothes and working in my underwear, the largest image I can process at 600 DPI is about 9 by 6.

A limitation of DMC's Star Screening module is that, to do work with 8- or 24-bit files, you also need the Color Separation module (now standard with *SL*). To export the created files, you need the Bridge module. Without Bridge, you can export files by using the GEM Image Printer driver and print the page to disk. You can now import that page and export the included IMG file. Finally, no matter whose Stochastic technology you use, you can forget about getting your results xeroxed. The dot pattern is way too fine. In fact, the dot pattern, even on a laser printer, resembles a continuous tone photograph. For using camera ready copy, your Service Bureaus's camera should be able to handle a 200 lpi screen. Laser copies, which cost between $1 and $4, depending on which copy shop you go to, come out fine. Even at *only 600 dpi*, these images resemble continuous tone photographs.

DMC's Star Screening Module

In figures 4 and 5 you can see the controls of the entire module. Learning how to operate this module is quite simple,

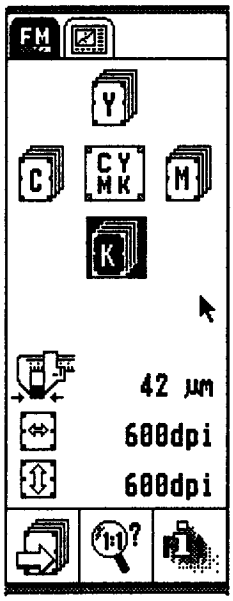

Figure 4

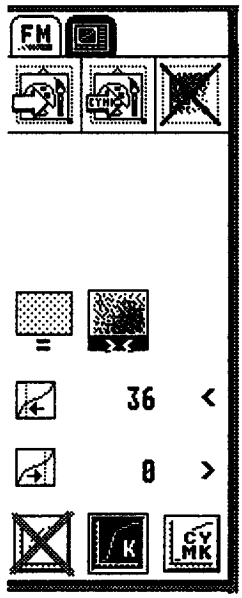

Figure 5

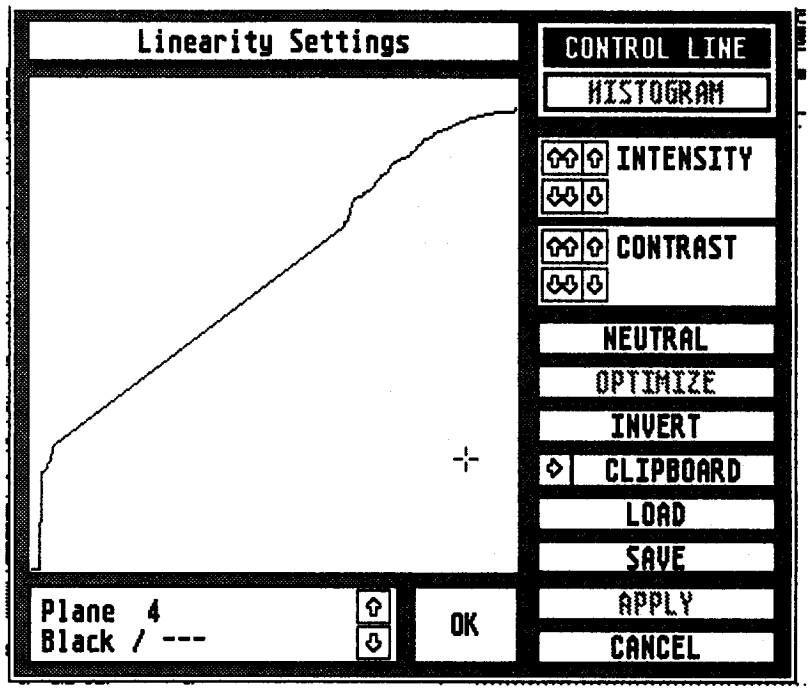

Figure 6

Figure 4. On the left is the first working screen of the Star Screening Module. On the top left are the icons for selecting a work screen. Below that we have the choice of how many color planes to screen or the center icon, which turns our image into an 8–bit color frame. Below that are the settings for dot size and dots per inch. Finally, the last three icons are, from the left, the execution command icon, the determine resolution icon, and the module information icon.

Figure 5. Here is the second screen of the Star Screening Module. In the top row are the icons for turning your screening directly into a bit image; the second icon turns your image into a 24–bit format. These two icons are reserved for the professional version of the module. The third icon is for turning Star Creened images on and off. Below that are icons to decide whether the screening should be random or fixrd point. Below those two icons is the dialogue for selecting the algorithm that the module uses for assigning gray values to the image. Finally, in the last row, there are icons for selecting whether the default, selected, or color control lines should be used.

Figure 6. Here is one of my early control lines and the dialogue used to create it. This is the from the Linearity module that comes free with Calamus. If you notice my poor little control line is quite jaggy. I could spend some additional time cleaning it up, instead I've ordered the optional All Curve Module, which makes use of bezier curves instead of free hand drawing.

and will give no one any problems. You click on the appropriate icons for whether you wish a color or black and white image, or if you wish separate color planes for 24–bit output or 8–bit color or monochrome. Once the command to do the actual screening is chosen, the module asks for a CK4 control line to be selected. This control line is created with the Linearity Module (The Linearity Module is included free with *Calamus*). This control line functions in the same way as adjusting contrast and brightness embedded in the Frame Module of *Calamus*. The final output of Star Screened images are, potentially, so much more detailed you will need to fine tune these control lines. Indeed, I recommend the optional All Curve Acc/Prg, available from DMC for an additional $25. The free Linearity Module requires the control line to be drawn freehand, while the All Curve program provides bezier curve support. In addition, this program will come in handy for the creation of any of the many control lines so necessary for color output, etc. Still, you can make this or any control line without this optional program. One bug in the above system is that control lines created by All curve will not load into *Calamus* unless the Document Converter Module is also present. However, once these curves are loaded into the Linearity Module and then re-saved, the Document Converter is no longer needed.

In general, so far as operating the Star Screening Module, the documentation is complete. Where the documentation falls down is in explaining how to export these files. Two options are grayed out in the module. "Create Bitmap Img" and "Create 24–bit CYMK Uniframe." Both of these options are strictly for the Professional version of the module.

Bigtime Surprise

Before going any further with this review, let me give you the **THE GOOD NEWS!** The junior version of this module does everything that the professional version does. This means that a technology that costs other computer platforms thousands of dollars can be had for $150. Let me continue. If you own the Bridge Module, then the output of Star Screened images can be converted or exported to conventional formats. To do 24–bit files, one uses the Star Screen Module to screen

separate CYMK planes, group the resulting frames, and then convert them to a CYMK 24-bit format. Another difference between the Pro and Junior versions of the module is that you are limited to 750 dpi output. In other words, you can screen images at 2400 dpi but you can't print them. No, you have to send them to a service bureau, which has the professional version of the module. But what if you convert these 2400 dpi images to another format? Well, the cat has leaped joyfully out of the bag. Star Screening Module plus Color Separation plus Bridge module equals the professional version of the Star Screening Module! My cup runneth over.

So often programs contain bugs, which take forever to repair or fix. Occasionally, a program contains features or options that were not intended to happen, but which work just fine. In this case, owners of *Calamus* have hit gold. What we have here is an unadvertised feature that gives us a technology that normally costs more then the entire *Calamus* program, including all the modules, at the incredible bargain price of $150. The only problem left unsolved, and this problem occurs in both versions of the module, is memory. This is a problem inherent in the technology, not DMC's implementation. You need lots and lots of memory and the only fix for memory is buying more memory. Even the virtual memory option of *Calamus*, vastly improved as it is, is not going to help. For one thing, Star Screening won't access virtual memory and, even if it did, the process would be incredibly slow. As it stands, a 9 by 6, 8-bit TIF (at 600 dpi), takes about three minutes to screen.

Hints and Tips

As I've said before, users of Stochastic Screening are entering uncharted seas. In this particular case, thanks to DMC, Atari users are ahead of the competition. How do we get the most out of this software? The following are the preliminary conclusions I've made. My printer is the Hewlett Packard Laser Jet IV. To compensate for the tightness of the dot pattern, I've developed control lines that the module accesses when screening an image. Creating these control lines *to match your particular printer should be the first step in using this module.* This question is clouded by the fact that this processing *looks at the gray level of the entire image.* In other words, if I crop an image so that the cropped part of the image has less or more contrast then the original image, the final outcome will be different.

After developing your control lines, start experimenting with the settings for the mathematical algorithms (see figure 5.) that determine the manner in which the Star Screening Module decides on whether a particular printer point will be black or white. Finally, remember that if you are bringing one of these images into a Service Bureau, *their printer is not your printer!*

Ultimately, I consider this method of screening to be as much an art form as a science. I've already told people that I *don't* recommend changing the contrast of an image *before it's screened.* I say that, because I feel that digital information can be lost if contrast is changed before screening. But there will be times when that is exactly what should be done! We all have a lot to learn about this exciting technology. Good results are not that difficult to obtain; excellent results require work and experimentation.

Conclusion

Calamus SL is such a powerful program, which operates in such a powerful environment, that anyone interested in serious Desktop Publishing should go out and buy an Atari just to take advantage of it. Readers should suspect that I really like this program. What was already a powerful program has simply gotten better. The new Stochastic Screening technology and DMC's implementation of it are just icing on the cake; but what an enormous amount of icing.

Softlogic has now abandoned the Atari platform. *Pagestream*, Softlogic's DTP program was a much easier program to learn than *Calamus*. Most of the problems with learning *Calamus* are in its unusual interface. Let me assure users of *Pagestream* that the fear of the *Calamus* interface is the biggest obstacle to learning this program, not the interface itself. *Pagestream* has, and continues to have, one advantage over *Calamus*: the compatibility with Postscript. While the Bridge Module still does not have full Postscript compatibility, the program is constantly being updated and home printers are constantly getting more powerful. The *Windows NT* version of *Calamus* is compatible with documents from the Atari version. Service bureaus should become more common as time goes on. Owners of *Calamus 1.09* and *Pagestream* can upgrade to the basic version of *SL* for $200. They will need a monitor capable of 600 x 400 and a minimum of 2 megs of memory. People who wish to make use of technology like Star Screening will have to pay an additional $300 for the two modules necessary to match the technology available on other platforms, which range in price from $600 to $20,000.

I will pause here to make an embarrassing confession. My article on *Das Picture* compared it with *Photo-shop*. Indeed, it was a favorable comparison. Unfortunately, I did not do anywhere near the research that I should have. I was looking at an old, obsolescent version of that program. *Photo-shop blows Das Picture* out of the water. I promise not to make this kind of error again.

For this comparison of Stochastic Screening I called Adobe; they informed me that the software was not *available at any price.* It was part of the equipment you acquire with a Lino. I called the *Photo-shop* division of Adobe; they informed me that their engineers were *looking* into the matter but had not yet started any work on the process. The *Quark* company told me that they didn't have it and that no else did. My next door neighbors purchased an interface for their Lino, which has the function built in for an extra sum of cash. I was unable to locate a program or module for any other platform, although they undoubtedly exist, which gives access ***today***, to this technology.

In the next issue of *CN*, I hope to do my long delayed review of the Catamaran Board.

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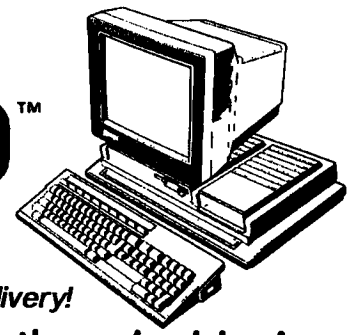

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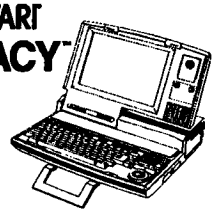

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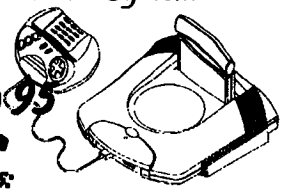

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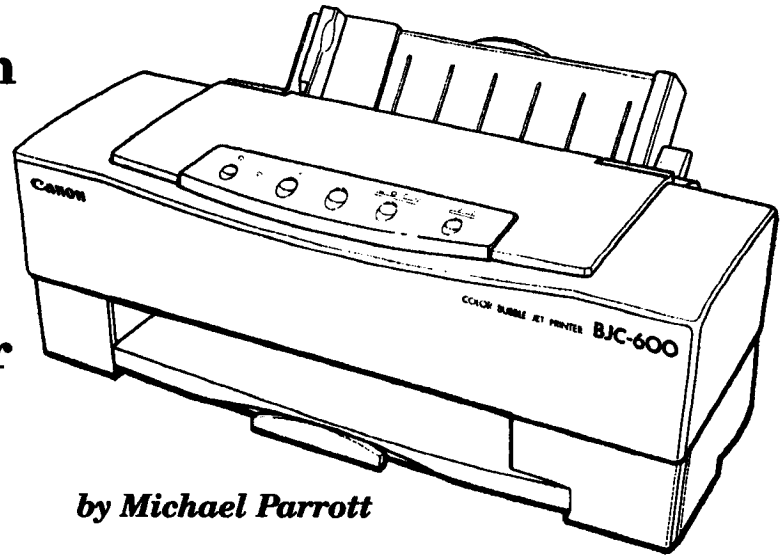
A Brief Primer on Color Printing
and
A Review of the Canon BJC-600 Bubblejet Printer
with Respect to Atari Computing
(whew!)



by Michael Parrott

While I can't speak for everyone, it seems to me that a printer is second only to the computer itself in making a computer system truly useful. With a printer, one can create hard copies of labels, letters, reports, database and other useful reference information; or generate artwork for newsletters, fliers and a host of other materials either for direct distribution or for offset reproduction at a printshop. The ability to print in color for any of these tasks just makes things that much more interesting.

Recently, I determined that enough use could be made of a color printer to warrant the purchase. The printer I purchased, after much research and gnashing of teeth, was the Canon BJC-600, a four-color bubblejet printer available at street prices as low as $499 as of this writing. After comparing the price, features, and quality of the color printers available in the under-$700 range, the Canon BJC-600 seemed to meet or exceed the capabilities of anything else out there, certainly exceeding all my expectations of a color printer in this price range.

A Color Printing Primer in an Itty-Bitty Nutshell

Color printers generate colors by printing with different combinations of either three or four colors of ink. The three colors primarily used are Cyan, Magenta and Yellow (CMY); these can be mixed to produce just about any color, including black, though this "psuedo-black" usually appears as a darkish-greenish-brown rather than true black. Better color printers will use Black as a fourth color (the "K" in "CMYK") for richer blacks and crisper details in the darker areas of a graphic.

The basic types of color printers available include, in ascending order, overall quality, and expense: Dot Matrix, Thermal Transfer, Inkjet/Bubblejet, and Dye Sublimation. All use different methods of storing and tranferring the material used to print on paper. For the purpose of this article, only Inkjet/Bubblejet printers will be discussed.

Inkjet/Bubblejet printers work by "shooting" tiny droplets of ink from a cartridge, through very small nozzles in the printhead and onto the paper; the method of getting ink out of the cartridge and through the nozzles varies between makes and models. The printhead travels over the paper in much the same way as a dot matrix printer, but "shooting" ink as opposed to striking a ribbon.

Quality, in the past few years, has increased dramatically, and many Inkjet/Bubblejet printers can now rightfully make comparisons against laser printers. Many factors affect the quality of output, such as the paper used, viscosity of inks and how quickly they dry, even room temperature and humidity. However, the latest improvements in inks and printing technology are making it very easy to produce excellent output under a wide variety of conditions–with the proper software, as will be discussed later.

To print in color, dots of ink–a printer's version of pixels–are printed in various combinations of the four basic colors, positioned very close to or overlapping one another on the paper in a process called "dithering." Some colors will come out looking very solid in appearance, such as the color Red, which is comprised almost entirely of Magenta ink. Other printed colors–such as Orange and Green–may appear to have tiny spots of other colors in them; this is due to the fact that they must be created from a dot-matrix pattern of two or more of the CMYK colors which, when viewed from several inches away, appear to be a solid color. The spotted effect is usually only apparent upon

close inspection of the printed page, and can usually be diminished if the software driving the printer is capable of random dithering. The software driving the printer also has a major impact on how accurately the colors a printer does produce match the colors desired.

While there are many physical factors affecting the output quality of color Inkjet/Bubblejet printers, the ability of the software driving the printer is perhaps the most important. Generally, any color printer will tend to produce better output when the software or printer driver in use is specifically tailored to the printer and its capabilities.

For the average Atari user, the choice of software from which to print color images is disappointingly low. Of those that do exist, one will find that the quality of images that may be obtained can, with a little patience and effort, be quite good. Examples of software I know to be capable of printing in color are *Calamus SL, PageStream, DA Picture, Prism Paint II,* and *Imagecopy II.* I'm quite sure I've missed several, but the fact that I can only recall five off the top of my head is something of an indication that color printing hasn't, in the past, been one of the Atari software strong points for the home user. More information on specific software will be covered in the Review portion of this article.

As a rule-of-thumb for printing in color, the brightest-white, heaviest text-weight paper you can find should be used. Most of the new low-to-mid-range color Inkjet/Bubblejet technologies provide excellent results on plain paper, which is fine for making proofs. But the better the quality of the paper, film or transparency stock used for final output, the better the finished product will look–period. So once you've dedicated yourself to a color printer, experiment a bit with what gives you the best results and invest in some of the better paper for your important projects.

My recommendation for most final output is Hammermill Laser Plus, with a hold-out feature to prevent ink bleed-through. Hammermill Laser Print runs a very close second. Both of these are non-glossy papers and much less expensive than some of the recommended glossy papers for Inkjet/Bubblejet printers, which can run upwards of $1.00 per page!

Another hint: Don't be fooled into thinking you have to use a color printer's default settings for printing everthing on every type of paper. For instance, I've found, in most cases, that setting a color printer to its Coated Paper mode will reduce ink usage on plain paper without adversely affecting the quality of the printed output.

Canon BJC-600 Features and Such

Now I get to brag about my new printer. For those who would like to do their own comparisons, here are some specifications on the Canon BJC-600, from the User's Manual:

Print method:	4-color, CYMK bubblejet
Paper feed:	Automatic or manual, 100 cut-sheet feeder (also feeds up to 10 #10 envelopes)
Paper size:	Letter or legal, A4 or B5
Paper types:	Prints on plain or coated paper, transparencies or back-print film
Printing area:	Letter: 8 x 9.875 inches Legal: 8 x 12.875 inches
Printing resolution:	Up to 360 DPI
Printer emulations:	Epson LQ-2550/2550C IBM Proprinter X24E Canon BJ-10
Input buffer:	60K
Download buffer:	36K (for "soft fonts")
Printhead:	64 nozzles for each color (!)
Power consumption:	28 watts (maximum)
Dimensions:	13.7" Wide x 7.6" Deep x 6.8" High

Note the size given for Printing area. I found it to be a little larger than specified–about 10.125 inches as opposed to 9.875 inches on a Letter-sized page. While that may seem small if one is used to working with laser printers, most of which have a printing area of 8 inches by 10.5 inches, I found it adequate for most of the work I do.

So there are some specs; but what really made me purchase the BJC-600 over some of the other color printers out there?

First, one must realize that there aren't really that many color printers out there that cost under $700, though with the market expanding so rapidly, it won't be long before there's a slew of them. Even as I write this, Texas Instruments and Epson are introducing color inkjets with expected street prices under $500! However, before jumping on the low-price bandwagon, do some research; you might be surprised at what a printer can cost over the long haul.

As an example of this, I very nearly purchased one of the first affordable non-Hewlett Packard color printers the day I heard of it. The Star SJ-144 looked like everything I wanted–small, 360 DPI, color capable, and, best of all, it was available for well under $500! Then I looked past the initial costs. While the average cost-per-page for a Hewlett Packard DJ-550C at the time was around $.36, the same page printed on a Star SJ-144 would cost $1.88–over five times as much! Over the course of a year, just 22 pages per month would cost more than the printer itself. Hardly a worthwhile investment for all but the

most meager of initial budgets and printing requirements.

While I won't go on about all the details of what I found, I did do a thorough comparison of the color printers available at the time, with emphasis on initial cost, cost of materials over time, and quality of output on both coated and plain papers. The Canon BJC-600 came out on top in every area except initial cost. Here's a quick breakdown of various initial and per-page costs at the time I did this research:

	BJC-600	Star SJ-144	HP Desk-jet 550C
Initial Cost:	$599.00	$499.00	$649.00
Cost per page			
Color:	0.16	1.88	0.36
Monochrome:	0.02	0.10	0.04
Resolution:	360 dpi	360 dpi	300 dpi

(Note: Prices are dropping rapidly due to the increase in competition, and the above prices will have dropped by the time you see this. However, barring an outrageously new approach to color Inkjet/Bubblejet printing, the overall comparison should remain roughly the same.)

The "Cost-per-page" was calculated from the cost of printer materials at average retail prices divided by the average number of pages one could expect to print from one ribbon, cartridge or set of cartridges with roughly 30% page coverage in color, and 5% page coverage in black. Assuming the printer in question was the primary or only printer, the BJC-600 should end up costing most users far less in the long run than either of the other printers, especially the thermal transfer printer! Another advantage the BJC-600 offers over other comparable color printers is that each color of ink uses its own cartridge. Most other color Inkjet/Bubblejet printers use one cartridge for Black and another, single cartridge with Cyan/Magenta/Yellow. With these printers, running out of Magenta means replacing a $30.00+ cartridge, even if there's still plenty of Cyan and Yellow left! The BJC-600 eliminates such waste by allowing one to replace a single, $8.50 cartridge of whatever color has run out, leaving the other colors untouched until they actually need to be replaced.

All that was left after this analysis was to compare the output of the printers. Again, the BJC-600 came out ahead in the comparisons I did using my own test files to check text and graphics in color and monochrome. The colors were brighter, looked better on plain and coated papers, had better overall resolution and (as I found out by accident) were more resistent to bleeding when exposed to moisture than the other inkjets' output. In fact, the ink used by the BJC-600 dries so fast it's ready to handle as soon as the paper is ejected; output from the other inkjet printer needed to be set aside for a few minutes to keep the colors from bleeding when touched.

Color Printing Arrives

Upon receiving the BJC-600, I discovered that it weighs only about 10 pounds, with dimensions of 13.7 x 7.6 x 6.8 inches–far smaller and lighter than the Hewlett Packard Deskjet printers. Some of the size advantage is lost when setting it up to print, though; the paper receiving tray takes up roughly ten inches in front of the printer when extended, and the extendable support for the cut-sheet paper feeder adds about three more inches to the overall depth. I personally haven't found this to be a problem, but it should be kept in mind when determining what location the printer is going to call home.

Installation and set-up are fairly easy and all is well-explained in the included documentation. An easily-accessable DIP switch under the cover allows one to configure some of the more esoteric options, and all commonly used controls and indicators are readily available at the top of the printer with brief but complete descriptions of their functions molded into the cover panel. A lever at the bottom of the Paper Feed tray allows for the handling of normal-weight papers, as well as thicker papers and envelopes. Another lever on the printhead raises it slightly to improve print quality on thicker papers.

The BJC-600 comes packaged with well-written documentation, a software driver for that popular PC-compatible-graphical-interface, and 20 TrueType fonts. Depending on whom you purchase it through, it may also include a printer cable.

Hard Times with Software

By now, some of you have got to be saying to yourselves, "All well and good, but how well does this thing work with an Atari computer?" I can't answer for everyone, as not everyone has the same expectations. But I should be able to provide some answers for most of you.

For monochrome printing, the quality of the BJC-600 is hard to beat. I've done head-to-head comparisons with output from one of the newer Deskjet printers sporting 600 DPI horizontal resolution, and the BJC-600 wins hands down. Blacks are BLACK, lines are smoother than one might expect and text is imminently readable–the very next best thing to a laser printer.

As mentioned earlier, the software you use to drive the printer will have a major impact on quality; but any software that can print to a Canon BJ-10ex or Epson-compatible, 9- or 24-pin printer can be used

with the BJC-600, and if the software generates great output, it'll look great coming from this printer. This means that even if you don't currently own any software which allows you to print in color but are considering some in the future, the BJC-600 is still very useful and will allow you to expand into color printing when you have the software to do it. Printing in color can, however, require a bit of patience and experimentation.

The application I use most for color printing is probably *PageStream 2.2*, using the Epson LQ-2550 Color printer driver (LQ2550C.PRT). I've tried other drivers provided by Soft-LogikPublishing for *PageStream*, but the LQ-2550 Color seems to work best. That's not to say that it's perfect, though. While the output is great for spot color (i.e., making the word "Sale!" Red or using color fills in portions of a vector graphic), color bitmaps don't always fare so well.

Color bitmap graphics tend to print from *PageStream* rather darkly, as the driver uses more ink than it really should. This can also cause pages to warp a bit from the moisture in the ink. This isn't strictly *PageStream's* fault–the driver *was* intended for a dot-matrix printer–but since *PageStream* doesn't have any features for adjusting the brightness or color balance of bitmap graphics, there's no way to correct this other than to edit the graphic in another program and re-import it into the *PageStream* document. One possible fix might be to write a printer driver specifically for the BJC-600, but Soft-Logik has flatly stated that they will not write any more drivers for *PageStream 2.2*. They have released the source code for their existing drivers, though, so it is possible–though unlikely–that someone will write a custom driver for the BJC-600. Please...?

There are a couple of other peculiarities with printing from *PageStream* to the BJC-600 that, once worked around, are worth putting up with. So, here are some hints for the PgS/BJC-600 combo:

1. Set the page size in the *PageStream* Page Dimensions and Printer Control dialog boxes to 8 inches by 10.125 inches. This is roughly the "real world" printing area of the BJC-600, and telling *PageStream* to use this size will result in printouts that more closely resemble what you see on the screen. Without this adjustment, page elements tend to be printed about a half-inch lower and a quarter-inch to the right of where they should.
2. When printing on Legal-size (14-inch) paper, the LQ-2550C.PRT driver doesn't send the proper commands to configure the printer to Legal mode. Attempting to print on Legal-size paper from *PageStream* will usually result in about 10 inches of the page being printed on one sheet, with the lower three inches or so being printed on another sheet, regardless of how Page Dimensions and Page Size are configured. One fix for this is a freeware Accessory from DMJ Software called BJFIX_11.ACC, which allows remotely configuring any Epson-compatible printer for either Letter-or Legal-size paper. Using BJFIX to set the printer to Legal just before printing from *PageStream* will allow a full Legal-size page to be printed on a single sheet.
3. If you use *PageStream*, write Soft-Logik and politely ask them to write a printer driver specifically for the BJC-600, preferrably one that will generate random dithering for bitmapped graphics! Even though Atari sales may have been bad enough to prompt them to stop development on new versions of *PageStream*, I still feel that up-to-date support for an existing product is deserved by its supporters. Alternatively, if you're a master programmer, grab the source code for the printer drivers and write one. I, for one, would be glad to pay a shareware fee for a driver to make this printer do everything it's capable of!
4. *PageStream's* output on transparency stock can be pretty incredible; with proper care taken to compensate for the lack of a specific driver for the BJC-600, I'd go so far as to say things look better on transparencies than on paper! In part, I believe this is so because of a very slight "spreading" that occurs when the BJC-600's inks contact the coated surface of bubblejet-compatible transparency film, which helps the edges of lines, shapes and letters appear smoother without the wicking. This also helps bitmapped graphics appear smoothly gradated and almost photo-quality, provided that proper editing has been done before importing into *PageStream*.
5. *PageStream* can output fairly simple pages such as colored text and very simple graphics fairly quickly–about a minute to two minutes per page. Very complex pages containing lots of colored elements and (especially) large, color bitmapped graphics can take a lot longer, though–up to 20 minutes for one extreme torture-test page I created, printed from a Stacy running at 20 Mhz. This really isn't as bad as it sounds; a similar page printed from an IBM-compatible 33 Mhz 486 using the Windows driver took just under 17 minutes.

The other program I use quite a bit with the BJC-600 is *Imagecopy II*, imported from the UK's ST Club by Codehead Technologies. Once properly config-

ured, the output from *Imagecopy II* on the BJC-600 is simply outstanding! The colors are bright and clean, and the apparent resolution can be amazing. For the most part, I use *Imagecopy II* to print color graphics only, pasting the resultant printout into page layouts, collages and such.

Imagecopy II is highly configurable with respect to printer options, allowing one to alter several parameters in order to obtain the best output from nearly any printer. For the BJC-600, the following settings in *Imagecopy's* "Printer Type" dialogue have given me the best results, and would be a good starting point for experimentation:

Printer:	Bubblejet LQ
Resolution:	360
Color:	CMYK
Halftones:	12x12 (16x16 works well, takes longer)
Quality:	Normal ("Draft" OK for testing only)
Output:	Direct ("BIOS" works, but slower)

Also, I'd recommend setting the "Brightness" control in the "Print Colours" dialogue to somewhere between 150% and 225%; this brightens the image up enough to keep colors saturated without over-inking the paper. For most images, I've found no other adjustments are necessary. *Imagecopy II* prints color images surprisingly quickly when compared to *PageStream*. Most images covering roughly 50% of a Letter-size page are printed within five minutes or so.

Another good thing about *Imagecopy II* is that it is being actively supported, and if what I've heard is correct, a new version, *Imagecopy III*, should be out in the near future with more features and support for more graphics formats. Definitely software to invest in for the graphics-hungry!

With both *PageStream* and *Imagecopy II*, occasionally some "banding"–the overlapping of the horizontal bands printed by each pass of the printhead–was visible, though with *Imagecopy II* one has to be extremely picky to spot it. Strangely, I wasn't able to track down precisely what conditions seemed to make some images more prone to banding than others, though I did find that *Imagecopy II* was less likely to produce output with visible banding. Banding of this nature is common to practically any printer that doesn't print an entire page in one pass (and very common on dot-matrix printers), but is more easily seen on color printers due to the darkening of colors that weren't intended to overlap.

For those who are interested, the BJC-600's output from an IBM-compatible computer using the included Windows driver is worth drooling over (good thing the ink dries fast, eh?). The Windows driver provides very flexible and complete control over the printer's functions, and the color-matching and dispersed dithering features help make for the best output I've ever seen from a color printer. The dispersed dithering option has the added benefit of practically eliminating the appearance of banding on printed images.

Sadly, nothing I've tried on the Atari could match the quality of output under Windows, though *Imagecopy II's* extensive color controls and dithering options allow it to come respectably close. As to how well the color output would look using other programs, I can't really tell you, as I don't have many to try. Any program capable of printing color to an Epson LQ Color printer should work, but the quality of printer drivers can vary widely and greatly affect the quality of the final output. I suspect that more recent, higher-caliber software such as *Calamus SL*, *Didot* and *Retouche Professional*, *Invision Elite* (color version) and the next version of *Arabesque Professional* will have at least basic support of Epson-type color printers, and may even have BJC-600 specific drivers in the near future. The best advice is to experiment; try everything you can think of to get the best output from your printer (nothing's too silly) and if it works, just remember how you did it!

The Bottom Line

Overall, I highly recommend the Canon BJC-600 to anyone looking for a color printer. It won't fit the bill for all Atari users, especially those without the software to drive a color printer. But if one has the software or is willing to spend as little as $35.00 to get it, the BJC-600 will provide excellent output for all the average user's needs while costing far less in the long run than other color printers currently available.

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[Michael Parrott has been a dedicated Atari user since 1989 or so, starting with a second-hand 800XL and eventually graduating to a TT030 with a few goodies that he uses for desktop publishing in his part-time business, ParaGraphics Design. This does not, however, preclude his Atari computer from being used for just about everything else one could think of. His "day job" is as aRadioman in the U.S. Navy, and he is currently instructing other RM's in Bangor, Washington.]

Nertz! Double Solitaire

(Would You Believe: Nine-Handed?) With An Attitude

Review by Sam Van Wyck

The main menu is colorful, convenient and offers a broad choice of options.

Something good is happening in Charlotte, NC and it goes by the name MajicSoft! Right on the heels of the *M.A.G.E arcade hits volume 1* (reviewed in *CN* this issue) comes a final version of *NERTZ!*, a double solitaire game that's fast, furious, fun to play and, courtesy of the MajicSoft crew, sports more bells and whistles than you ever thought existed!

If you remember Double Solitaire as something terminally boring that you and your grandmother played while you were laid up for a week with measles, forget it—unless she arrived on a Harley Chopper wearing leathers. *Nertz!* can support up to nine players, of which three may reside within your computer. At any number greater than two it resembles mayhem more than solitaire.

"Let's Play NERTZ!"

The game is introduced with a very nice synthesized piano version of Joplin's "The Entertainer." Ordinarily, I find incidental computer music to be something to be endured or turned off completely. This selection is a notable and welcome exception and ends all too soon as the main menu screen appears. It may be reinstated by pressing keyboard "S."

Characteristic of MajicSoft programming and design is an obvious concern for the user, amply demonstrated by the large number of options available from a colorful pushbutton menu. While all the features are covered in the documentation, the majority are truly self-explanatory. Even the modem and MIDI operations aren't all that difficult, but newcomers will welcome the additional assistance available both from within the program as well as from hardcopy.

The novice will probably want to begin against a single computer opponent at Level 1. No changes are really needed from the main screen except that this reviewer found that selecting card face #2 provided a larger and more easily identifiable suit designation. Be assured, when engaged in heated battle, there is no time to be lost trying to find the club foundation pile among all the spades! Press the PLAY button and the fun begins.

Did we mention that this game talks to you? For instance, when you hit the Play button, you hear "Let's play NERTZ!" Other appropriate sounds enhance the game and, indeed, are essential to keeping up with your opponents' play. The ultimate winner is greeted with a chorus of cheers, boos and snide comments.

Why NERTZ!?

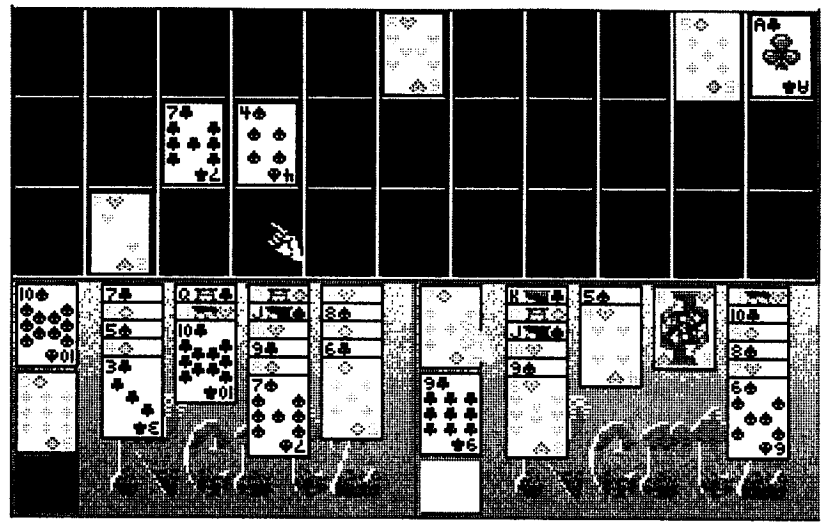
Why indeed? Play it once or twice and the reason becomes obvious. The game waits for no man (or woman). Once play begins, it's every computer for itself and moments of total inactivity are interspersed with sudden flurries of (mostly the computer's) cards hitting the foundation pile while the poor human(s) try desperately to keep track of the action. The first player to empty the 13-card *NERTZ!* pile ends the hand but does not necessarily win overall.

NERTZ! resembles "regular" solitaire (if there is such a thing) in that there is a Foundation pile in the middle of the table where aces are played, followed by cards in suit and sequence. Below the foundation, each player has a "table" of four piles upon which cards are played in incremental sequence and alternating color. A "store" pile contains face-down cards which are turned three at a time for play onto either the foundation or the four table stacks. There are no hidden cards in these locations.

The big difference between *NERTZ!* and other solitaire games is the *NERTZ!* pile. This is a stack of 13 cards with the top card exposed. Cards are played from the top of this pile onto the table, following the alternating color rule, or the foundation. However, these cards may also be played *under* a table pile. For

instance, if a table stack runs from a red jack to a black six, a red five or black queen could legally be played from the *NERTZ! pile.*

A second feature of the *NERTZ!* pile is that when any player empties this stack, the hand ends. This may result in an optional bonus and explains the name of the game as the others express their disappointment. (Surprising, this, as during the entire time of play-testing this game, no loser ever said "NERTZ!" although there were a number of other expressions used from time to time. Perhaps software reviewers hang out with a low, uncouth crowd).



The game board. A two–player contest is about a third complete. The left pointer indicates the Foundation table where the aces are played. The one to the right marks the NERTZ! pile.

Scoring

Scoring is simple but serves to add an element of strategy to the basic game. Each card a player moves to the foundation pile scores one point, for a maximum possible 26 points. Subtract two points for each card left in the *NERTZ!* pile and this number becomes the player's score. (The original card game subtracts one for each card left in the four face-up Table piles). It is possible that this could be a negative number. Highest score wins; it's that simple! Well, almost.

If all that is wanted is a single hand, fine, but *NERTZ!* is like those little potato chips that come in a can; the ones shaped all alike. It's virtually impossible to remove a single chip from the package and there are very few who can stop at just one. For the aficionadi (sing., *aficionado)* there is

The Tournament

A tournament is composed of a number of hands played to reach a predetermined game score. The author suggests that a good starter level is 100 points, that generally providing about three hands. Novice players like the Bonus option, which awards 20 points to the first person going "out" in each hand. This puts a premium on fast reflexes and very good eyesight.

The more cerebral or experienced might prefer scoring without the bonus. In addition to watching for opportunities to play a card, it is also necessary to evaluate just how close one is getting to the end of the NERTZ! pile, the opponent's situation ditto, and one's own Table cards, each of which represents a potential additional point when promoted to the foundation. Is it better to try to go "out" now or maybe play a bit longer in the hope of moving more cards out of the NERTZ! pile or onto the Foundation? That's NOT an easy question to answer, especially when the Foundation stacks are filling rapidly and noisily!

Tournament winners get to add their names to the Honor Roll of All Time GREATS (Yea! Loser: BOO!). Also, for the convenience of younger players or those who may be arithmetically challenged, an alternate scoring mode is available that adds 26 to every score, thus insuring against Negative Number Syndrome.

That's *How* You Play; Now Set Up *Whom* You'll Play

First, you can play alone against one, two or three computer players and each can be set to one of nine skill/speed levels. Two "meat" players may share the same computer in split-screen mode using two joysticks. The same two can go out and buy two separate *NERTZ!* programs (one cannot be copied and played against itself; reduced price "Buddy Packs" are available) and play via modems or a null-modem connection. Up to nine(!) may compete via MIDI interconnections.

Imagine the entire networked accounting section of Megalith Industries getting together for a *NERTZ!* session just before the CEO drops by for a surprise visit. Play is INTENSE; distractions must be ignored and only one, the Master computer, can end play. You KNOW that player would be the last to find out!

How About the Little Things?

There are very few negatives to *NERTZ!* Only two major annoyances come to mind. One, the joystick response is too touchy. It takes a lot of practice not to overshoot with the cursor. John Stewart assured me that it was either that or the next lower level, which was agonizingly slow. Better to have it too fast and learn control.

The second could be improved, however. That is the placement of the aces in the foundation pile locations. There appears to be no reasoning behind where an ace will go. In a game with several players there may be 20 or more foundation piles with suits intermixed. It would be easier play and far less eyestrain if the suits could be kept together. The computer wouldn't mind and the meat players would find this aspect of "housekeeping" easier to cope with.

The instructions are clear and understandable both on disk and in the printed version. The "book" is minimal in size and typeface, but readable. Smart players, especially those expecting a crowd, will print out the rules file in 10- or 12-pitch and pass copies around.

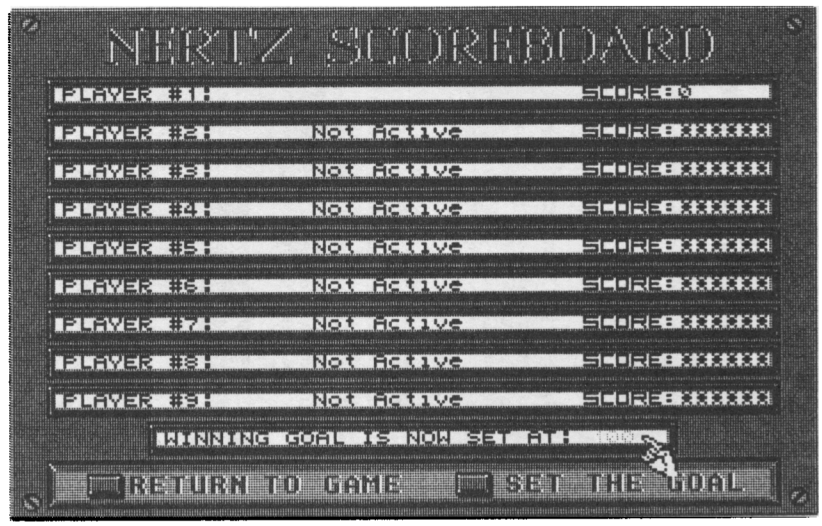
The use of color, sound, legible card faces and control functions plus a great game concept all combine to make *NERTZ!* one of the most enjoyable games of its type that we have seen for years. It even has its own screensaver, which kicks in after a period of inactivity and obligingly retreats when play resumes!

Each disk must be "Installed" before it can be used. The purchaser's name and address are encoded before the program and other files are unpacked. Naturally, if any original purchaser then decides to put the whole thing up on the local BBS, the crime will be quickly and easily traced back to the villain.

There is a danger, however, that disk ownership might change and the new owner be less than scrupulous about "sharing." Thus the original, innocent buyer could suddenly become the object of some unpleasant comments should the publisher take offense. Perhaps that is a small cost to pay for an unprotected program that will work from either a hard drive or floppy.

To relieve monotony or make things easier, especially for kids, there are a number of cardfaces and backs in the library. Face Number two provided the largest and most easily identified traditional pattern.

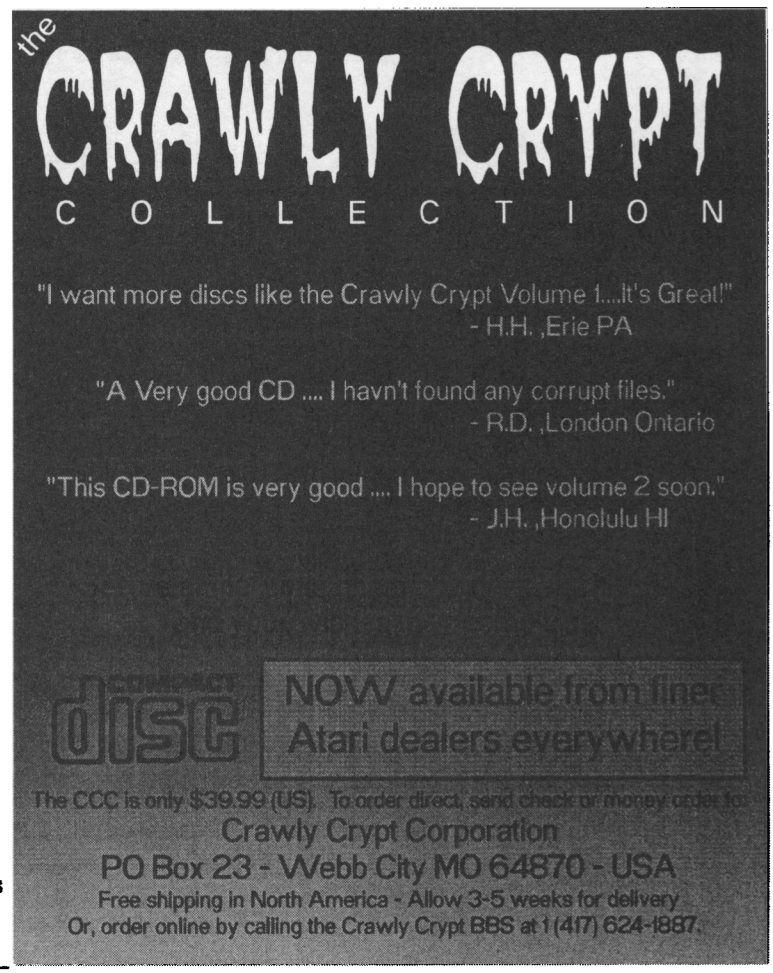
NERTZ! is a product of MajicSoft, Inc., of 348 Meredith Square, Columbia SC 29223 (803) 788-9177.



The tournament table will record high scores of each hand. The Tournament goal has been set to 100 which will permit at least three hands.

A Final Note

So often, we think of a computer game or simulation as being something that allows us to play alone without the necessity of finding partners or opponents. Occasionally, a computer game can provide us with ideas and games that can be used (dare we say this?!) *while away from our computers! Awari*, recently reviewed in *Current Notes*, is one of these. So is *NERTZ!* Here is a game that can entertain a whole Cub Scout Pack, including leaders, stuck in a small cabin on a rainy afternoon. All it takes is a pile of (preferably) old packs of cards and enough room for a small crowd. After that, the action takes care of itself. Imagine, it even works if the power goes off!



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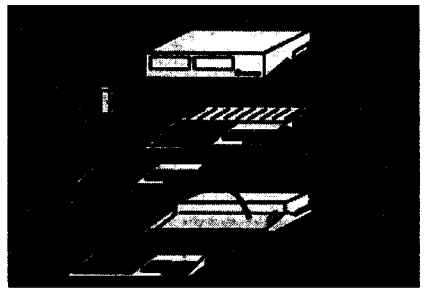

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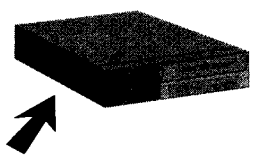

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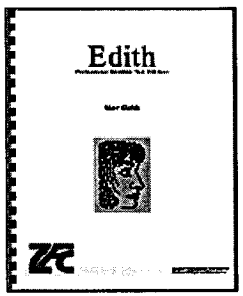

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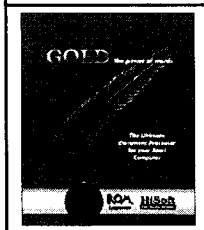

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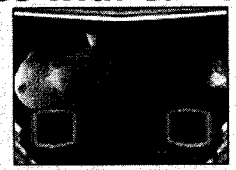

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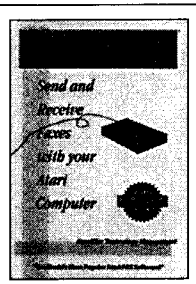

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Djinni

Aladdin Comes to the Atari 8-bit

Review by Wendell "Atarian" Hong
GEnie: animatsuri

For awhile now, Atari 8-bitters have been wanting an offline reader program so they can save a lot of time and money on GEnie like those other guys who have *Aladdin* for the IBM, Atari ST, and Amiga. Even those "other" 8-bits like the Commodore 64/128, and Apple II's had GEnie offline readers. Before *Djinni* (it's been out for a almost a year now), the best one could do was use *Bobterm* macros a lot and chat mode window to type ahead commands while waiting for the next GEnie prompt. It a took a bit of hand-eye coordination doing it this way. It was also possible to use a script that was developed for use with a program called *Backtalk*. The only problem with using *Backtalk* is that it's an old program and doesn't have some of the newer protocols like Z or Y-modem. The script also needed to be rewritten every time you wanted to add a new RoundTable (RT) to the list that *Backtalk* scanned. Then, Jeff Williams (GEnie: ALFRED) took it on himself to write the Atari 8-bit answer to *Aladdin*!

So, do I like *Djinni*? You bet! With *Djinni* you can keep track of up to 20 RTs, including the Libraries for each, along with any e-mail and files that might come attached with them. *Djinni* captures all messages in the CATagories and TOPics you've picked, which you can do beforehand with *Djinni* off-line, and will also capture a list of new files so you can tag which ones you want and have *Djinni* download them when it logs back onto GEnie. On that, let me note one big feature of *Djinni* that's also a first for Atari 8-bits--the ability to download using the much talked about Z-modem protocol. And they said it couldn't be done on a Atari 8-bit! All the "big" computers use Z-modem for max download reliability. [Editor's Note: For more on Z-modem, see Frank Walter's article in the May '94 *CN*, "Larry Black's Atar-Z-Modem."]

With all this automation, *Djinni* has saved me an average of $30 or so. My total monthly GEnie bill is now usually $20 or less. In fact, *Djinni* allows me to participate in even more RTs than when I was doing it "live" and pay the same amount when I was only accessing half that number of RTs.

Djinni does have a few drawbacks. It truncates really long messages since it can only hold so much in memory. The TO: field for sending e-mail isn't long enough to put in an Internet address. The text editor is rather primitive, but, unless you're going to write a thesis, it should be good enough for most purposes. The good news is most, if not all, of these drawbacks will be addressed in a future version of *Djinni*.

The documentation tells you everything you need to set up *Djinni* for use on GEnie. Setting up *Djinni* involves setting GEnie up for use with *Djinni* and setting *Djinni* up with things such as Baud rate, log on info *Djinni* needs to know and where you want all the files *Djinni* will create as you use it. A hard drive or something similar is highly recommended if you cover a lot of CATegories and TOPics. All those messages add up!

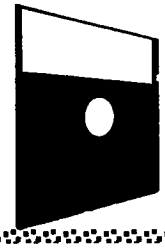
If you make any mistakes, like draft a message and then change your mind about sending it out, you're able to delete the message anytime before you send *Djinni* on a post/capture run. The menu on *Djinni* is very user friendly; if you've used either *Bobterm* or *Express!*, you'll have no trouble moving around on *Djinni*. Sometimes GEnie takes too long to respond with the next menu prompt. Should *Djinni* get stuck, you can abort and *Djinni* will still process what it did capture so you don't lose much, if anything.

The software/hardware I use with *Djinni* is *MyDOS 4.53/3*, an Atari 800 with a one-meg ramdisk, and an XF551 modified for 3.5" disks. However, *Djinni* works with just 48K of memory. What 8-bit owner nowadays doesn't at least have that much for their Atari? It works on any Atari 8-bit computer ever made. A hard drive or other big storage disk drive is recommended. *SpartaDOS* is also recommended if you want to be able to move around certain files from one drive to another drive or to another subdirectory.

Djinni is a regular download as file #6859 in the Atari 8-bit software library on GEnie. (The GEnie SysOps should make *Djinni* a permanent FREE download, in my opinion.) Product support is available from the author on the Atari 8-bit RT on page 665 on the Telecommunications Category #8 (GEnie key word: ATARI8). Or, if you have the time, ALFRED (Jeff Williams) also shows up at the Atari 8-bit Real Time Conference (RTC) Thursdays starting at 10pm EST. Yes, there still are Atari 8-bit RTCs, despite the fact that they aren't listed on *LiveWire's* list of events. Best of all, except for the time it takes to download *Djinni*, the cost is free. As I mentioned before, an update to *Djinni* is now in the works. So, if there are any other features you'd like to see after using the current version of *Djinni*, now's the time to speak up and ask for them!

So there you have it. You don't need a fancy high end computer to get the same off-line reader conveniences that they get. You just need an Atari 8-bit and *Djinni*.

I give *Djinni* an overall grade of B (on a scale of A - F).



Dollars and Sense

Do You Have Too Much Computer?

by Joe Walsh

Internet: ransom22@delphi.com

Atari 8-bit computers provide all the computing power most people will ever need for home use.

Why are you looking at me like that? Oh, you say you'll need some convincing before you'll believe that? In that case, read on . . .

I've been doing a lot of thinking, recently, about computers. More specifically, I've been thinking about what we use computers for. Why do we have computers at home? What is it that has prompted us to invest thousands of dollars in these boxes of silicon?

I have had a fairly lengthy history of computer use. My first computer was an Atari 400, which I received as a present in 1982, at the age of 13. Through the years, I've owned a 1200XL, an Apple //c, and several models of MS-DOS boxes. Every time I've purchased a new computer, it has cost more than the previous one. Usually, the price difference was around $500. What have I received in return for that additional money?

A few years ago, I returned to my first "hacker" machine, the Atari 8-bit. Since I now spend most of my computing time (outside of the workplace) on the Atari 8-bit, it has made me wonder whether anything else is necessary, and, if so, for what application(s)?

While considering the above questions, I've reflected on my last 12 years of using computers and come to a conclusion about computer usage in the 1990's. The computers of today provide no real increased value to the average consumer over what the computers of a decade ago offer. Rather, today's computers provide nothing more than nearly useless features beyond what can be achieved with a suitably equipped Atari 8-bit that is available for a fraction of the cost.

I realize this may seem ludicrous to you, but before you dismiss it, consider what your computer is used for. Word processing, spreadsheet calculation, database searching and telecommunications account for 99% of all non-game computer usage in the home. These are tasks that can be quickly performed by even the earliest 8-bit computers having a minimal amount of memory.

The one type of program most frequently used on home computers is games. In this area, it is evident that the more powerful the machine is, the better the graphics will be. However, the same effects can be achieved by both a $2500.00 computer and a $250.00 dedicated game machine. Clearly, high-quality games are not a good reason to spend thousands of dollars on a computer. On the other hand, Atari computers offer an astounding variety of excellent games, all available at a very low cost. Their graphics are not as good as those of today's best game machines, but the play value of the games is very high. Atari computers are the ultimate gaming machines.

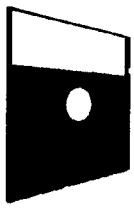
The remaining computer use legitimately requires powerful computers. The Atari 8-bit will never be the computer of choice for manipulating scanned images, for instance. Computer aided design is much less useful when attempted on an 8-bit computer. However, home usage of such programs is very small and does not account for the widespread acceptance of powerful computers. These programs are most typically used in the workplace, where powerful computers belong.

It has now been shown that it is by no means necessary for the vast majority of computer users to own today's computers. Instead, the classic 8-bit computers are perfect for home users. Most people would easily be able to get their work done with an unmodified Atari 130XE, a color monitor, an 850 interface, a couple of disk drives, and any of the currently produced high-quality/low-cost printers and modems.

The benefits of using Atari 8-bit computers are numerous. For example, Atari computers and peripherals can be manufactured cheaply. And, while the software already in existence for them is abundant, there are numerous programmers who have cut their teeth on these computers and who would be able to produce effective and astonishing programs for them, were the user base to become large enough for it to make economic sense to do so.

In addition, by capping off the growth in home computing power, stability would be achieved, which would ensure a large reservoir of resources for computer users. A huge software library, numerous knowledgeable fellow users, and an extensive array of magazines and books would be available. Today's computers offer only a minimal amount of useful resources, as the pace of change makes most books useless soon after publication, and users struggle to stay abreast of developments. In a hardware-static world, users would be presented with a wide range of information that would retain its usefulness in perpetuity.

(Continued on page 45.)



The Complete and Essential Map for the XL/XE

Published by TWAUG Publishing

Book Review by Michael W. Todd

GEnie: s.snyder10

Probably one of the most important sources of information you'll find on the bookshelf of every seriously dedicated Classic 8-bit programmer is the venerable classic by Ian Chadwick, *Mapping the Atari.* As important as this reference work is, however, it's not without its faults. How many times have programmers wanted to have those XL/XE appendices included within the main body of the work. How many times has someone begun the work of re-writing and updating this classic to better reflect the changes made to the XL/XE only to have it go unfinished.

Eleven Minutes After Midnight

At that odd hour on April 20, 1993, Andrew C. Thompson undertook to do more than just a minor update to Ian Chadwick's work. What Andrew had in mind would take him the better part of the next nine months and produce one of the most complete and up-to-date references available for the Atari XL/XE: *The Complete and Essential Map for the XL/XE.*

Largely based on *Mapping the Atari, The Complete and Essential Map for the XL/XE* not only updates the original work, but includes a wealth of new information and programming examples. Every memory location was checked and compared with the information found in appendices 11 and 12 of *Mapping the Atari* and updated accordingly. Missing and new material extracted from various sources, including Club Newsletters, Atari specific magazines and numerous other hard-to-find books and reference notes on the inner workings of the 8-bit system, were added as well.

The Essential Map

Let's take a closer look at the book itself; make that both books. That's right, two books totaling nearly 400 pages and including the complete source code to the XL/XE operating system. Part one of *The Complete and Essential Map for the XL/XE.* at first glance, looks strikingly similar to the work on which it's based. However, to quote from the author's own notes in the preface, "Fear not my indulgent beings for you have not wasted your cool investment." And a waste it is not. Part two contains not only the XL/XE OS source listing, but no fewer than 43 appendices covering everything from basic keywords, error codes, and 6502 assembler op-codes to math and programing examples.

The day the books arrived, I was please to find that they were both spiral bound, very similar to the original *Mapping the Atari,* with sturdy clear plastic protective covers. The British A5 booklet size makes it easy to work with on a crowded computer desk.

As stated above, Part 1 does look very much like "Mapping the Atari" and, in fact, the great majority is taken directly from that work. On closer inspection, however, you'll find that many of the listings have been expanded to include new information and or programming examples. The more you study the map, the more you'll find yourself stumbling over something new, interesting and different. Several times, as I was first reading through the map listings, I can recall saying to myself, "If only *Mapping the Atari* had explained it this way." I credit this to Andrew Thompson's clear and friendly writing style. Difficult subjects are covered thoroughly, yet never once does the reader feel left behind by the explanation.

One of the first things an American reader is likely to notice about some of the listings in the map section is that both the PAL and NTSC version of the Atari are handled on a more equal basis; something *Mapping the Atari* was lacking in. Nonetheless, *The Complete and Essential Map for the XL/XE* falls victim, from time to time, to home system prejudice, as well. Most notably, this occurs during the discussion and example programming under the RTCLOK listing ($12, 13 14).

Something I did find missing from this work was the addition of new information concerning the cartridge control register ($D5xx) and the PBI device area. Neither revision of *Mapping the Atari* went into much detail on these areas, nor does *The Complete and Essential Map for the XL/XE.* This is something I find wanting from an otherwise very complete work.

Forty Three Appendices!

No memory map for the Atari would be complete without a number of appendices going into greater detail on subjects that could not be fully covered in the general listings. *The Complete and Essential Map for the XL/XE* is no exception. Not only does the author cover the expected subjects of memory management, VBI's, DLI's, and updating the OS, but he goes so far as to try and make this second part a reference work that can easily stand by itself.

What I came to like most about this second part was the way it covered such a wide variety of topics. Included within is a complete listing of all the error codes for not only DOS 2.5, but DOS 3.0 as well. Oddly, the error codes for MYDOS 4.5 and SpartaDOS were not included. Going further, you'll find a listing of keywords for not just *Atari Basic* but the ever popular *TurboBasic 1.5*, as well. For those a little weak on higher math, the author has taken the time to provide a list of common trigonometric formulas that can be included within your programs. Need tips on improving your code? There's a section for this, as well.

Boolean logic, something I've not seen really talked about in the majority of Atari publications, is also covered. There are many examples of the use of Boolean logic included, which demonstrate ways to conserve memory and, at the same time, increase the speed of your programming.

The thing that will be the most attractive to the serious programmer, however, is going to be the two sections covering the 6502 op-codes and the XL/XE OS source listing. The author has spent a great deal of time researching all of the 6502 op-codes, both legal and illegal. Not only does he list the functions of each of the illegal op-codes, but the timings of each, as well. Included with the example programs found at the end of this second part is the program the author used to verify the timings of each of these op-codes.

The section I spent the most time with was the OS source listing. For the real 8-bit hacker this is likely to be the most interesting part of the whole package. You can spend a great deal of time tracing through the OS, finding out the hows and whys of everything.

Send your orders/inquiries to:

TWAUG	or	David Ewens
P.O. Box 8		48 Fouracres Road
Wallsend		Cowgate
Tyne & Wear		Newcastle-On-Tyne
NE28 6DQ		NE5 3AX
United Kingdom		United Kingdom

You can also call David at 091/2710086 if you have any other questions. (Don't forget to add the country code.) The price for both volumes is £16 plus postage. Postage is as follows: United Kingdom (£1.50); Europe (£2.50); US/Canada: Air Mail (£5.50), Surface (£2.50); Australia: Air Mail (£6.50), Surface (£2.50). Payment can be made by check made payable in Pounds, by International Money Order (IMO) or in dollars (dollars/actual currency at the current exchange rate) by registered mail. I think your best bet is the IMO. Most banks can pull that off, or sometimes there are booths at airports.

I could go on for a very long time. Suffice it to say that the second part of *The Complete and Essential Map for the XL/XE* is a true gem of a reference work. That's not to put down the first part, the map itself; but, in this one book, I have found a quick and easy desk reference to a large variety of subjects that's both complete and clearly written.

Conclusion

In short, *The Complete and Essential Map for the XL/XE* is likely to become one of the most used references when talking about and programming for the XL/XE system. Intelligently written, complete and well researched, this is truly a fine update to the classic *Mapping the Atari*. This doesn't mean, though, that it's only for the advanced programmer. No, the range of information contained within can be well used by both novice and experienced programmers alike. Truly, *The Complete and Essential Map for the XL/XE* deserves a home on the bookshelves of everyone who still enjoys programming on the 8-bit Atari.

Too Much Computer *(continued from page 43.)*

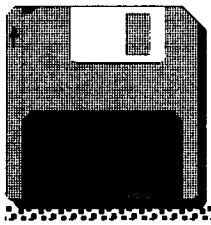
The other side of the coin is that manufacturers would no longer be able to re-sell product to existing users at such a fast pace. Rather, the market would become like that for toasters, radios and electric razors. Periodic replacement would be the leading reason users would re-purchase equipment.

The manufacturers would instead have to turn their focus to software innovation, where it belongs. Newer and better programs are always welcome, as they add real utility and value to existing hardware. These benefits are available through software without the large expenditures associated with computer replacement.

Thus, consumers would win in a world without hardware advances. However, since the hardware manufacturers would not win, it will never happen unless consumers indicate that is their wish by their purchasing pattern.

My conclusion is that we've all gone along with the marketing departments in their quests to make their bosses richer (and, more importantly, to keep their jobs). We've emptied our wallets into IBM and Apple Computer for no good reason. It's time to get off the technology upgrade treadmill.

Spread the word of the power of Atari 8-bit computers. But don't just tell people of the wonders achievable with these low-cost machines, show them! Once they see what can be done with your Classic, perhaps they will come out of their marketing-induced fog and want one, too. Then we will be one step closer to achieving sensibility in the world of computers.



PC Xformer 3.0

Atari 8-bit Emulation in a PC!

Review by Robert Boardman, (C) 1994

GEnie: r.boardman

"PC Xformer 3.0 turns your PC into an Atari 130XE in seconds/ With full support for Player Missile Graphics, display lists, 256 colors, GTIA graphics, split screen smooth scrolling, joysticks, modems, printers, and is fully backward compatible with existing ST Xformer and SIO2PC generated disk files."

PC Xformer 3.0 User's Manual

For $29.95 the user gets one 3.5" floppy disk and a 36-page manual written in fairly small but readable type. Right from purchase it should be obvious this is not a product one can use with a stock Atari 8-bit computer. It is designed to be installed and run on the latest IBM-compatible personal computer. It requires at least a 386 PC with 640K RAM and VGA graphics. *PC Xformer* requires, and is compatible with, *DOS 5.0* and above, is compatible with *Windows 3.1*, *Windows NT*, *OS/2 2.1*, *OS/2 Warp* and promises compatibility with *Windows 95* (whenever it arrives). For this review, *PC Xformer* was tested on a 486DX40 with 4 Meg RAM and *MS-DOS 6*.

The *PC Xformer* disk includes several things that might make it worth buying, even if you don't intend to use the emulator. It includes a copy of the shareware version of *PC Xformer*, version 2.5, which you are encouraged to copy, share and distribute to Atarians everywhere. However, distributing the commercial version is software piracy, theft, and cannot be condoned. It also contains Nick Kennedy's extraordinary SIO2PC software with full instructions on how to build the SIO2PC hardware interface. The SIO2PC allows an Atari 8-bit computer to use RAM on a PC as if it were a series of virtual drives. And it's not a bad way to get a copy of *MyDOS 4.5*, if you can't find it anywhere else.

Your reviewer has been working with Atari 8-bit computers since 1986 and presently owns two, a stock 800XL and a 130XE transformed into a 320XE with a Transkey and an IBM keyboard. I have worked with IBM-type computers since 1988 and I am a computer support technician at a Toronto hospital and teach *DOS* and *Windows* programs as a private trainer. I also own a Mega4 and use a Falcon 030 on a daily basis.

I introduced the shareware version of *PC Xformer*, version 2.5, to the Toronto Atari Federation. (Watch for us at ACE '95.) So I jumped at the opportunity to take a good look at this commercial version. I felt 2.5 had some drawbacks, which I hoped would not be present in 3.0. Many of the deficiencies, which the author acknowledged were present in the shareware version, have disappeared in the commercial version. Some of what I saw as drawbacks are inherent in this kind of emulation and may be impossible to eliminate in any version of *PC Xformer*. That is not to say the program is a disappointment, for it is not; but it is to say that I am not comfortable working with the style of emulation Darek has used.

PC Xformer does what the back cover of the manual says it does. In about the same time as it takes to load *AtariDOS* or *MyDOS* or *SpartaDOS* on my 130XE, *PC Xformer* transformed the test DOS computer into a machine that looked and performed much like my 130XE. Branch Always Software provides a wide variety of programs on the *PC Xformer* disk. There is only about 2.5K of free space on the high-density floppy. In addition to the program files for version 3, there are seven full disk images (at 92K each, equivalent to seven single-sided, single-density disks) offering a variety of demos, games and other types of programs suitable for use with *PC Xformer*.

Perhaps it was the machine I was using, but I felt the speed of response of *PC Xformer* was slower than I am used to with my 130XE. In particular, *PC Xformer* had difficulty keeping up with my typing, a problem I rarely experience on my 130XE. Mihocka makes it very clear in both the manual and the on-disk documents that *PC Xformer* is a graphics intensive program. Perhaps the test PC was deficient in that area. The manual states *PC Xformer*, on a 486DX33, should run about twice as fast as a 130XE. Such was not the case in my experience, although seemingly identical DOS computers from different manufacturers will generate a large range of response times to the same program. Perhaps I used a "slow" 486DX40.

Operation of PC Xformer

PC Xformer works with disk images. While it can use exe, com and Basic program files directly, it works most efficiently with disk images. Each image is, or rather represents, one single-density single-sided floppy disk (about 92K of information). *PC Xformer* can address up to 8 "drives," as disk images are referred to in the documents. The images are virtual

drives, which exist only in the RAM of the DOS computer while *PC Xformer* is running. It is easy to load and unload these drives by simply pushing F11 and giving the appropriate instructions. It is normal for D1 to contain the OS you wish to use. Branch Always provides both *AtariDOS 2.5* and *MyDOS 4.5* in disk image format. For those who like to tweak the OS, ataribas.rom (Basic), atariosb.rom (OS rev B) and atarixl.rom (OS rev D) are provided. However, Mihocka states you need a hex editor to change them and you must also be familiar with machine language and the Atari OS.

After installing *PC Xformer* (an operation made fairly simple by an MS DOS Batch file), you start *PC Xformer* from the MS DOS prompt (using MyDOS as the Atari OS):

```
xformer mydos45d.atr
```

This loads the disk image for *MyDOS 4.5* into D1. Tapping F11 then allows you to load in any disk image or program file in the same IBM directory into any other virtual drive in *Xformer*. Alternately, you can load the disk image(s) you want at the command line.

```
xformer mydos45d.atr demos1.xfd startrek.xfd
```

will load *MyDOS* into D1, demos1 into D2, and *Startrek* into D3. To start one of the demos, get a directory of D2 and then run the program as one would with a multidrive Atari 8-bit computer.

Loading programs is just as simple.

```
xformer mydos45d.atr tpx520.com
```

puts MyDOS into D1 and *Textpro 5.2* into D2. Start *Textpro* through the *MyDOS* menu as usual and then you can start typing a new document. The difficulties start when you wish to edit an already existing document. It has to first be loaded into a virtual drive, or be part of an already existing disk image, which gets loaded with *Xformer* or with F11.

This "problem" editing previously existing *Textpro* documents highlights the frustrations I had working with disk images. Before I continue, these frustrations are not because the program won't do what it promises. Rather they are inherent in the disk image method of emulation. Branch Always has been writing emulation software for a long time. Not being a programmer, I assume they have chosen the best way, perhaps the only way, to emulate an Atari 8-bit on a PC.

Problem 1. The emulation works well and efficiently if you are working with a full (or nearly full) disk image. However, it is not efficient with small files. In order to save a file, it has to become part of one of the virtual drives. You cannot save a file directly to the PC's hard drive (and certainly not to a floppy disk). Once a file is part of a disk image, it requires another program (S2PC, which is supplied by Branch Always) to split it out of the image and into a file that can be saved onto the hard drive. If files are not grouped together onto virtual drives, it is one file = one disk image.

Problem 2. The user has no access to the file directory on the PC's hard drive. If you forget to start a file as an image and can't remember its name in order to use F11 to load it in, you have to exit from *Xformer* (a tap on F5), do a directory, record or remember the name and then start over. This problem might be solved in *Windows* where it is possible to switch from one operating window to another. However, I didn't wish to impose another operating layer on top of what I felt was already a system which responded too slowly.

Problem 3. Some programs open a channel directly to a disk drive for reading and writing and do not recognize a virtual drive. *Shoplist / Shopedit* is one I encountered that refused to use the virtual drive.

Problem 4. Building an image file can be like copying a floppy disk one file at a time. This repetitive work can be greatly reduced a) if you own or build an SIO2PC interface or b) if you own and know how to use Bob Puff's DCM program.

Problem 5. The emulation will only work with programs that can be copied onto a hard drive. This eliminates any program that has copy protection built into the master disk and any program that comes on a cartridge. Examples are many and include popular programs like *AtariWriter, Synfile, Syncalc, Alternate Reality.*

Testing PC Xformer

Unlike the shareware version, v. 3.0 supports Player Missile Graphics and allows use of joysticks, including the fire button. Of course, you will need a standard 15-pin IBM-type joystick. Unfortunately, the standard 9-pin Atari joystick doesn't work with an IBM-type computer. There are lots of great action games if you are a gamer and prefer 8-bit games to any of the more recent DOS, Windows, and ST/TT/Falcon games. Personally, if I'm going to play a game, I want the best possible sound and graphics I can get, even if I'm playing old timers like *Space Invaders*. I'm sure if I weren't "joystick impaired" I'd also want the fastest possible machine as well. Speed is one area where this emulator falls down, at least on the test machine.

In addition to watching and using some of the programs supplied by Branch Always, I also tested a few from my own library. As I mentioned above, I started and used *Textpro 5.2* quite easily. *Textpro* printed using the regular LPT1 on the computer just as any DOS program would. However, it refused to

save files, either new ones or ones retrieved from other virtual drives, to any drive other than D1. I had exactly the same problem with two BASIC programs I ran as well: SHOPEDIT.BAS and PHOTOLBL.BAS would only save to D1, which added their files to the *MyDOS 4.5* disk. *Shopedit's* companion, *Shoplist*, refused to recognize the virtual drive and reported an Error 163 when trying to access D1.

Printing from *Textpro* and PHOTOLBL.BAS went well, except the Canon laser attached to the PC did not recognize the Epson codes and used a standard 10 cpi Courier font instead of the small fonts *Photolbl* is supposed to generate.

To test the sound capabilities of *PC Xformer*, I used the Antic ASP program. Mihocka notes in the on-disk documents "only Ad Lib and Sound Blaster compatible sound cards will work. Currently only the four pure voices are emulated (no speech synthesis or distortion)." I don't know if that means to get sound using *PC Xformer* requires a sound board, or if *PC Xformer* will produce sound no matter what but is only compatible with Ad Lib and Sound Blaster sound cards. In any case, the ASP program would not generate any sound whatsoever, although it was clearly working since it would produce color on the screen equivalent to the sounds being used. I should note that other programs *did* generate sound through the stock PC speaker, including an annoyingly loud key click that was more like a key beeeeep.

I got an interesting error with a Basic program called *Statwhiz*. It generated an Error 2. According to the *PC Xformer* manual this indicates a lack of memory. Perhaps the *PC Xformer* does not use RAM as efficiently or as well as the 130XE where *Statwhiz* runs quite well. It is hard for me to accept that the PC was out of memory running *MyDOS* and *Statwhiz* when my 130XE can handle both comfortably.

The emulation looks good. It starts easily and runs well. However, like all emulators, it requires a lot of horsepower on the host system (the IBM-type PC) in order to run at a speed approaching the system being emulated. It also cannot be designed to deal with every programming trick used in the tens of thousands of programs and by the thousands of people who wrote programs for the Atari 8-bit computers in more than 10 years of experience.

Documentation and the Manual

There is on-disk documentation, which every user should read and print in order to keep it handy for it will be needed. The manual was written by Bill Kendrick, a well-known name in the 8-bit world and the amount of information presented is incredible. As a former English teacher, I had some difficulties with parts of the manual. Some fairly basic errors in grammar were missed by the proof reader. That quibble aside, Kendrick included a little information about using *PC Xformer* which could, probably should, be expanded if it is to be of value to users with little experience with computers, either 8-bits or PCs. The manual needs a Table of Contents and/or an Index to be useful as well as voluminous.

There is a wealth of information about Atari 8-bits in the 12 appendices of the manual. These appendices are mislabelled since they occupy 27 of the 36 pages of the manual. They are the content and the first 9 pages are merely ancillary to them. Not being an ardent programmer, I don't have the knowledge to check the depth of detail Kendrick lists. However, what little I know checks out with what he writes. (My bias: knowing Bill's reputation in Atari circles, I wouldn't expect to find errors in this information.) If you want to know about the differences between ASCII and ATASCII, device calls, channels, error codes, colors, graphics, sound and more, look no further.

However, in spite of all this information about 8-bit Ataris, there are few suggestions on how to take advantage of *PC Xformer* in either the manual or the on-disk documents. For example, the guide to the function keys used by *PC Xformer* instead of the standard Atari cursor keys, Select, Option, Help and Reset is split between pages 10--11, in Appendix B. Not easy to find unless you know where to look. There is a detailed discussion about the various *MyDOS* and *AtariDOS* menu items on pp 4--6, but little (or nothing depending on your view) about building disk images from multiple small files.

Perhaps the lack of documentation around the program is because Branch Always thinks *PC Xformer* is self explanatory. Those unfamiliar with Atari 8-bit systems will get lost at several points and probably give up. Atari 8-bit users who are unfamiliar with MS-DOS will also get lost, at different places probably, and will get little help from the printed documentation. For example, the on-disk documentation offers the following hint: "If you are using a laser printer which needs a form feed character to eject the current sheet of paper, type this from Basic: LPRINT CHR$(12)." How does one do that if one is using *Textpro*, or some other Atari program that assumes one has an Epson compatible printer? I have several suggestions for a new manual, if one is prepared for any future revisions:

1) Use a larger type size with more variety in type style.

2) Provide more detailed instructions on preparing disk image files.

3) Include a Q & A section: What do I do now? What did I do wrong if ... happens?

4) Package the appendices in a separate booklet.

5) Provide a Table of Contents.

One exception to the shortage of documentation occurs in the on-disk documents. There are clear instructions on how to change *PC Xformer* disk images (XFD files) into image files SIO2PC and S2PC can use (ATR files).

Why PC Xformer?

For some people, this may not be an important question. They'll spend the $30 and try the program out to support Branch Always and/or support people who continue to work to keep the Atari 8-bit alive. However, *PC Xformer* is not an 8-bit program, even though it was written by someone who has been involved with Atari computers for many years. *PC Xformer* is a PC program, designed for IBM clones. Why should I (or anyone else) spend $1,500 or more for hardware in order to run a $30 program that emulates a computer system, which I can purchase for less than $200 just about anywhere in North America?

There is the wonder of being able to run *Textpro* or *Donkey Kong* with their native Atari look and feel on an IBM system. For that alone, perhaps *PC Xformer* is worth buying. There is also the wealth of information presented in the manual. For some, that is worth far more than $30. Those who have only enough desk space for one computer and who wish to maintain (or perhaps establish) their links with the Atari 8-bit world will welcome *PC Xformer*. It does open up any IBM-type PC to the wonderful world of 8-bit software with all (in reality most) of its sterling qualities and niggling idiosyncrasies. For those who really want to know about the development of computers and who wish to "get their hands dirty" with a powerful and inexpensive system, however, I suggest to those people they buy a real Atari 8-bit system. Check out your closest users' group, buy-and-sell newspapers, garage sales, buy-and-sell news groups on GEnie and other electronic networks, and electronic surplus stores.

Branch Always Software and Darek Mihocka have contributed a lot to the Atari world. I want to encourage them to continue their efforts and keep putting out high quality programs. But recognize *PC Xformer* for what it is, a good effort at making a software emulation of obsolete hardware. If you are interested in the hardware, buy it. If you don't have the room for another pile of wires and little black boxes, *PC Xformer* can simulate, in a reasonably realistic fashion, what computing was like 10 years ago, but only if you have up-to-date equipment to run the simulation on.

Suggested List Price U.S.$29.95. For more information, a product catalog, or to place an order, contact:

Darek Mihocka, c/o
Branch Always Software
14150 N.E. 20th Street
Suite 302
Bellevue, WA 98007 U.S.A.

Phone: 206-369-5513; Fax: 206-885-5893. E-mail: Compuserve: 73657,2714; GEnie: BRASOFT.

PC Xformer 3.0 can be ordered for $29.95 U.S. directly from Branch Always Software at the address above, or from the following other fine Atari dealers:

U.S.A.	**Voice**	**Fax**
American Technavisions	510-352-3787	510-352-9227
B & C Computervisions	408-986-9960	408-986-9968
Branch Always Software	206-369-5513	206-885-5893
Mid Cities Computers	310-867-0626	310-920-8933
Rising Star Computers	800-252-2787	513-254-7970
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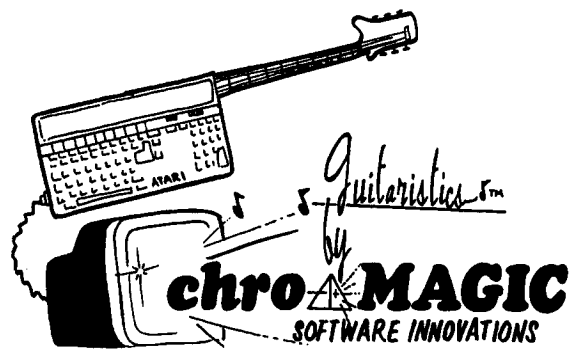

Guitaristics version 1.93

Guitaristics is a complete guitar tutorial for the Atari ST/ TT/ Falcon that explains music theory, technique & improvisation. CHORDS: Inversions, subs, functions, voicings, arpeggios, and chord analysis. SCALES: Major, minor, jazz, rock, blues, ethnic, synthetic, modes, and harmonic analysis in all keys.

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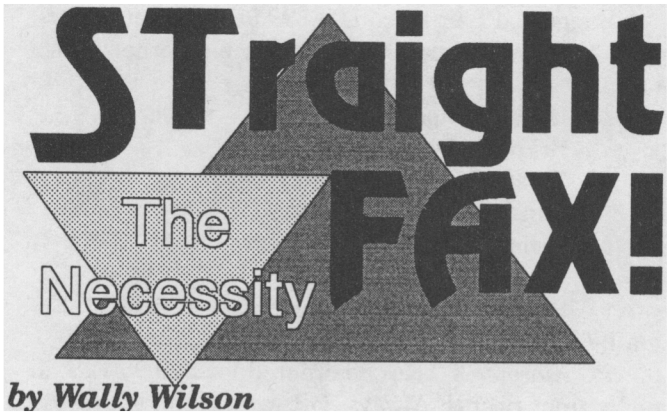


by Wally Wilson

Files, STandards, and FAX's

It used to be that the shortest distance between any two objectives was a STraight line...and then the human race invented computers, operating systems, FAX machines, modems, and file-format standards. This normally would be a story to be drooling over, but something got in the way of all this standardization—I call it *specialization*. If you are special, you will not only be noticed, but you will work better within your specialty.

I mean, where's the sense in your word-processor converting your documents into and out of a graphical file format if the majority of the work is simple ASCII? Not only do I notice that DROOL.TXT is not the picture file for which I was looking, but I immediately know it is a text file—that's not only noticeable, it is specialized.

Enter the Atari computer and its own brand of file-format chaos . . . GEM, CDK, TXT, STW, STD, DOC, ASC, IMG, PI3, PC3, CVG, CVD, NEO, GIF, TIF, etc., ad nauseam. What's a poor FAX modem program to do? Isn't anyone on the same wavelength? Certainly, if we are to show the rest of the world that all computer users are kindred spirits in the arts of conformity and productivity, we need some help putting up the proper front.

To put on your best face, put your best foot forward, get your FAX's STraight, and generally smell good in public will take something like *STraight FAX!*. In this world of touch-tone touch and go, *STraight FAX!* is not just another nice utility—it is a necessity. A necessity that will gracefully prepare your *Atari Works*, *Calamus 1.09n*, *Calamus SL*, *PageStream*, *That's Write*, and *DynaCADD* files for a quick injection through your FAXmodem. What, you've got GDOS 1.x, FSMGDOS, or SpeedoGDOS? Print that document out under your favorite GDOS using the special *STraight FAX!* GDOS printer drivers. Support is built into *STraight FAX!* for *1st Word* and ASCII files, as well as GEM, PCX, *Degas*, and IMG files.

Let's take a romp through this beefy program and see what happens . . .

Setup and Configuration

Setting up *STraight FAX!* proves to be a fairly easy process, and when it gets tricky the manual does point you in the right direction. The manual is set up to walk you through each of the menu items, step by step. You can cruise through the program from left-to-right, top-to-bottom by going through the manual from beginning to end.

Another part of the installation process involved setting up the *STraight FAX! Manager*. The FAX Manager consists of an AUTO folder program (about 6k), and an *Xcontrol* panel CPX module. The FAX Manager will redirect any FAX's you print from your various applications into a folder of your choice; I've got mine set up to put these unsent FAX's in the SEND folder. This is a great timesaver, and completely does away with looking for those FAX files you print, then moving them to a folder of your choice. The FAX Manager will also keep track of these files and allow you to list them from the CPX.

Currently, the manual is up to version 2.00, and includes a 2.10 addendum at the rear of the manual. A 2.20 addendum is on the *STraight FAX!* disk, and greatly helps in discovering some of the newer features of this fine program. NewSTar Tech is working on a 2.20 addendum.

No matter what, the most-up-to-date help for the current version of *STraight FAX!* is always available whilst you are in the program, doing your thing. Every time you see a little question-mark, that is your key to online help. It works very well, is very informative, and eliminates the need to go looking in a table of contents and then go reading somewhere else in the manual for help. All the help windows have real-time scrolling (a very nice feature) . . . where, if you grab the slider-bar and start to move it, the text in the help window scrolls in relationship to the slider-bar position. I do like this!

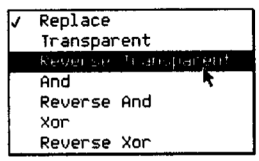
Cover Page

The cover page can be configured to be sent automatically, or not. I like this, as it isn't always necessary to have a cover page, and not sending one saves long-distance time. You can also leave the first lines in the "TO:" line blank and they will be filled in with the information from your dialer set up. This is nice, saves some time, and certainly keeps things consistent when sending a lot of redundant FAX's. You can use *CardFile* to send a name and FAX number to the cover page—a definite plus. I like it when developers accommodate some of the niftier functions of other applications and utilities into their own programs.

When Charles Smeton showed me some of the nifty ways you could tweak *STraight FAX!*, one of the things he did was to set up a cover page with one of my own graphics included. Of course, he did it so

quickly that I couldn't follow it, and when I got back home, I immediately deleted the cover page so I could try it for myself. I'm funny that way.

During my quest for the penultimate cover page, I found an array of graphics handling tools more than suitable for the task. *STraight FAX!* uses the Atari Clipboard, and you can choose from every conceivable paste option. This includes XOR, transparent, etc. I also found that the minus key on the keypad will reduce the size of a viewed graphic or FAX file by 50%. You can then activate the graphics functions with the right mouse button, draw a frame around what you want, and cut it to the clipboard. A very sweet addition to what is an already formidable application.



It took me a while, and I did finally get a graphic of the proper size included in my cover page. I would mention, however, that this isn't exactly well-covered in the manual. Though, I presume this is a part of the problem with not having an entire graphics program integrated into *STraight FAX!*. It's close, but won't replace *Invision Elite*.

Let's Use This Puppy!

For my initial testing of *STraight FAX!*, I used the FAX machine at work. Things I would normally print out at home, then take to work, are now sent by FAX. Things that I would normally bring home from work and retype, or scan, into my computer are sent by FAX to *STraight FAX!*.

With a little use of OCR, I found myself quivering with glee as I saved myself hours of typing and scanning . . . all I had to do was export my FAX's to IMG, then convert them to text with OCR! Ok, enough of this fanfare—how well does this program work?

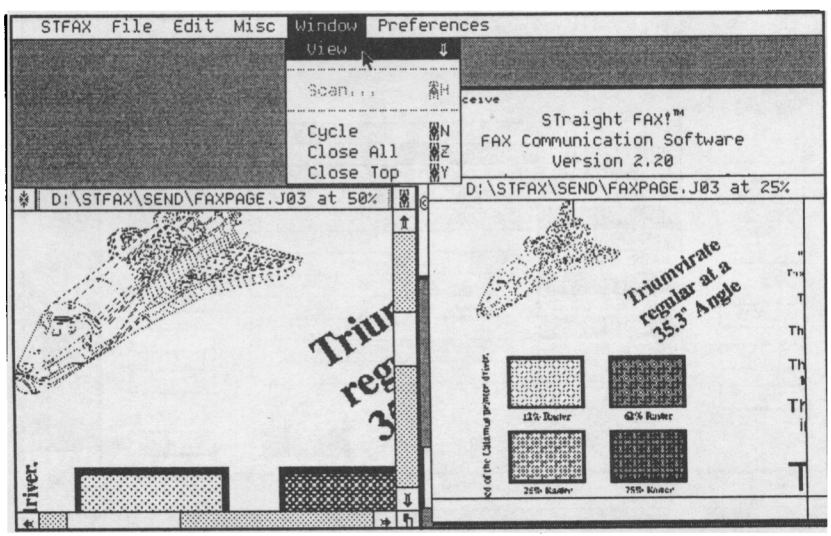
I used *STraight FAX!* to request numerous FAX's from numerous local, state, corporate, and Federal agencies. This involved a lot of different FAX machines and FAX modems. To date, I have not experienced any problems connecting to such set-ups!

I have found a type of voice-mail system that allows for you to (supposedly) begin sending a FAX after a message/menu-driven voice-mail spiel that I haven't gotten to work. I was so perturbed that I took the number to work and tried it from the FAX machine there, and I still can't get a FAX sent to these setups.

Wally, this is all well and good, but it really doesn't tell me much . . .

Ok, Ok! I was working on a letter in *AtariWorks*, and was going to send it via regular mail (the person did not have Email). I did have their FAX number, but had never had the means to make use of it before. I went to my Printer accessory for SpeedoGDOS, loaded the *STraight FAX!* printer driver, and printed the letter to a FAX file. With the Fax Manager CPX installed, the FAX was printed to the SEND directory in my *STraight FAX!* set up.

But I wasn't done . . . I had a three-page informational memo to send to all the offices I routinely have to deal with. I had been postponing sending it because it would require printing it, copying it a buzillion times, stuffing it into a buzillion envelopes, licking them closed, come up with the money for stamps (which are going up to $0.32 soon), licking these expensive stamps onto these paper beasties, and then dropping them into the mailbox. Oh, I forgot that I'd have to address these envelopes, as well. Never to see of them again, or even know when they arrived. I sent the pages to *STraight FAX!* from the FAX machine at work, exported the FAX to IMG format, OCR'd it, and imported it into *Calamus 1.09n*. After about an hour's worth of sprucing things up and making it look really sweet, I went to the Print function of *Calamus*, loaded the *STraight FAX!* printer driver for *Calamus 1.09n*, and clicked on *OK*.



Still, I am not done . . . My boss needed the new shift-roster to reflect recent personnel changes. Since I am the official keeper of the roster, I went back into *Calamus*, but this time it was *Calamus SL* (I just upgraded). Normally, I print this roster out in a *mere 23 minutes* on my 24-pin dot-matrix printer, then take it to work. Not this time! I went the the Print function in *SL*, loaded the *STraight FAX!* printer driver for SL, and blammo! One FAX, ready to go. This very same functionality is possible with any GDOS application, *Atari Works*, *Calamus 1.09n*, *Calamus SL*, *Pagestream 1.8x* and *2.x*, *That's Write*, and *DynaCADD*.

Done? Nope, not yet . . . By this time, I've been in front of my computer for nearly two hours. This may sound like some sort of marathon-session, but it is literally one-half the time it normally would be at this point. I exit *SL*, and go directly to *STraight FAX!*. I call up the Multiple File FAX Transfer menu, and ALL of my newly-printed FAX's are listed in their own button-boxes (a box that is selectable). I select the letter and hit *OK*, click on where I want it to go. It finishes; I'm happy. I go back to the Multiple File FAX Transfer menu, click on the personnel roster files (there are two pages), hit *OK*, select the FAX number to send these to from the Phone Number Chooser, hit *OK* again. It finishes; I'm happy.

Am I still not done? No, not quite. I didn't want to send this FAX to over thirty different offices paying daytime long-distance rates. I went into the Event Scheduler and set it to send all of these FAX's after 11:00pm! I wasn't going to be using my computer at that time anyway. It went off without a single hitch, I had a complete account of the status of each FAX I sent in the FAX Send Log, and the job was done. No baby-sitting, no fuss. It is very nice to have a return receipt for your efforts without having to pay for certified, or return-receipt mail at the post office.

Using the Event Scheduler is great if you are multi-tasking with *MultiTOS* or *Geneva*, or are running *STraight FAX!* as a desk accessory (and have enough RAM to do so). Otherwise, you will have to run *STraight FAX!* and leave it running through the time-frame the FAX's are due to be sent out.

Ok, now I am done!

But I Wanted It in IMG Format

Now that I've gotten a bunch of FAX's, it is time to do something with a couple that I didn't want to convert to text with OCR. You can export your FAX files to IMG, IMG/GEM, PCX, or *Encapsulated PostScript* (EPS) format.

This makes it a simple matter to load a FAX into your favorite graphics program, vectorize it, add some trimmings, and then import the graphics into your word-processor or desktop publishing application. Without a doubt, this is handy. For me, it means having the ability to receive a FAX from someone wanting me to do a graphical or desktop publishing layout for them and not start entirely from scratch . . . they can FAX their ideas, sketches, photocopies, graphics, etc. to my computer. After that, it is a simple matter to export to IMG format and go to town with *Invision Elite* and *Calamus* in very short order.

The possibilities are endless!

The Support

Currently, the two best sources for *STraight FAX!* support are GEnie's Atari ST RoundTable, and TOAD Computers at (410-544-6943).

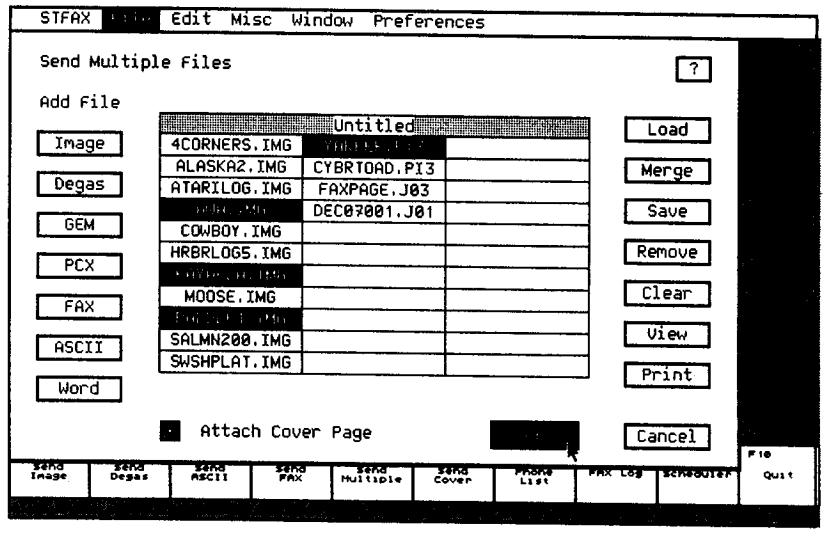
The best thing about online support is the pool of experienced people who are also using this program. I have yet to see a question asked that wasn't answered within a day's time by a knowledgeable user, and Charles Smeton tries to stop in to answer messages nearly every other day. When Charles answers your question online, there will be no doubt in your mind that a mere phone call would not have been as adequate. Additionally, answers to other folk's problems are there to read as well—so increasing your knowledge and getting your questions answered can usually be accomplished by going back through the messages and reading what has gone before. The replies to cries for help and assistance are easy to print out for future reference, or for those times you need to go through something step-by-step.

Often, several others have been through exactly what you have, and know precisely how to help you out without the trials and tribulations they may have gone through to find the answers. You will find Charles Smeton, of NewSTar Tech, a rich source of information and support on GEnie.

Besides, if you have an Atari, and *STraight FAX!*, you must have a modem . . . The online experience is but a phone call away.

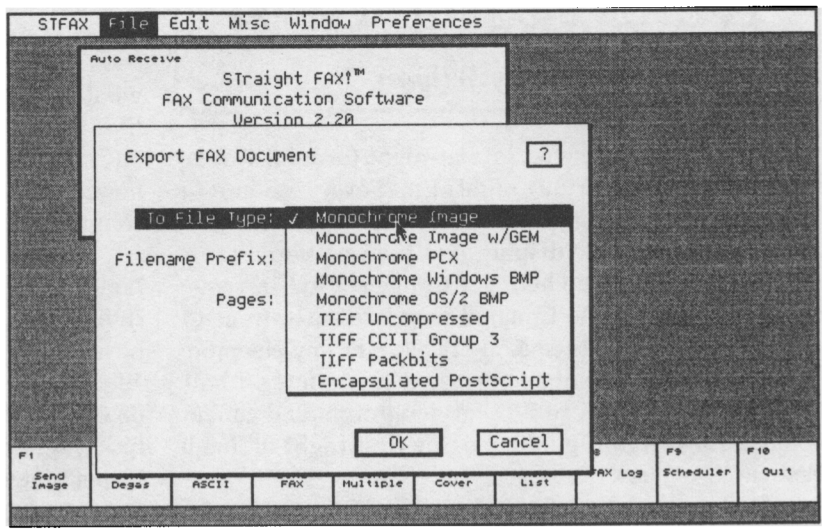
STraight FAX! is a product of NewSTar Technology Management, and is available from most Atari Software dealers. At the time of this writing, *STraight FAX!* is listed at $109.95, and I regularly see it on sale for $80.00 to $85.00.

The upgrade prices for *STraight FAX!* are very reasonable. If you are upgrading from 2.00 or 2.10 to version 2.20, the price is $5.00. If you are upgrading from a 1.xx version to version 2.20, the price is $30.00 plus $3.00 for shipping and handling. They request



you include an extra $2.00 for shipping and handling outside of North America.

It should be noted that no *STraight FAX!* upgrades will be processed unless you have previously sent in your *STraight FAX!* registration card for the version you currently have. If this sounds kind of unreasonable, consider that *STraight FAX!* programs of all versions have been found on bulletin boards throughout the world . . . versions with the serial numbers cracked, versions with complete manuals done up in *PageStream*, you name it. NewSTar Tech has lost a lot of money to *pirates*, and this is the result. So, make sure you register ALL of your software—especially *STraight FAX!*. Then there will be no problems when upgrading.



[NewSTar Technology Management, P.O. Box 0122, Columbia, MD 21045-0122. Support BBS: 410-544-6999; FAX: 410-544-1329; Email: C.S.SMETON@GENIE.GEIS.COM.]

The TechnoSTuff

I tested *STraight FAX! 2.20* on my Atari 1040STe, configured with 4 megabytes of RAM, a Migraph hand scanner, SM124 monochrome monitor, and a ZOOM VFX v.32bix FAXmodem (and 250 megabytes of hard drive).

I also tested *STraight FAX!* on a 6meg TT030, with TOS 3.06, and a 210 megabyte hard drive. I used both ST HIGH, and TT MEDIUM for testing, and encountered no problems at all. For kicks, I also tried *STraight FAX!* on my Mega ST2, from floppies . . . again, no problems encountered (though, I did have to cut down on my usual number of SpeedoGDOS fonts due to only having 2 megabytes of RAM on the Mega).

My software set up for normal use included the following accessories: *CardFile 4, Printer Drivers CP, Outline Fonts CP, Warp9 CP, MaxiFile,* and *Xcontrol Panel*. AUTO Folder programs included: *HotWire, GSelector, P_R_Save, Serial Fix 2.0, SpeedoGDOS 4.0, STE_FIX, STFAXMGR,* and *Warp9_ST*.

I also tested it with *MiNT 1.12, NeoDesk 2.05, TeraDesk*, and *MultiTOS* with no problems whatsoever. It is worth mentioning that *MultiTOS* with *MiNT 1.12* needs to have the SLICES set to 4 to be usable, and still is a bit slow on the modem transfer rates. Using only *MiNT 1.12* produced no noticeable slow down in transfer rates unless I was running a TOS program or two in the background; and you do get that slightly sluggish feel with menus under even the latest version of *MiNT*.

Currently, the GDOS-to-FAX printer drivers for SpeedoGDOS do not appear to work with *NVDI 3*. NewSTar Tech is in contact with the creators of *NVDI*, and will be working on *NVDI*-compatible drivers for *STraight FAX!*. The current work-around is to print your file out as a 200dpi IMG file using *NVDI's* special IMG printer driver, and then import the IMG directly into *STraight FAX!*.

Try as I might, I could not get *STraight FAX!* to crash under any but the most ridiculous conditions . . . like running *MiNT* and *Warp9* and SpeedoGDOS and a couple TOS windows—then running *STraight FAX!*. This speaks well of *STraight FAX!*, and supports my opinion that this is truly an outstanding, and robust application!

At Long Last . . .

I can't say enough good things about this application. It has become a cornerstone on my system, around which I am able to do more, and look good doing it. The results it produces are top-notch, the interface is well-thoughtout and implemented, and the flexibility is nearly endless. The user interface, in my not-so-humble opinion, is nearly flawless. *STraight FAX!* specializes in taking those myriad files from different applications, and presenting them to the world—via a FAX machine. It includes all the tools you'll need to create a STraight line between your productivity applications, and your FAX modem.

If you have a FAXmodem and an Atari computer, you owe it to yourself to get this program. *STraight FAX!* will change the way you think about computing, and will raise eyebrows doing it.

I can count the really serious, milestone applications for our Atari computers on both hands. Get ready to add another: **STraight FAX!**

TOAD HolidayFest 94

by Wally Wilson

I got there somewhat late at night (around 7 or 8 in the evening) on Friday night. I met everyone in a whirlwind tour, got my STuff set up for my GEnie Atari ST RoundTable display, and then bothered everyone into letting me help get things set up (in typical Wally-fashion). We finished very late/early, went to our respective abodes (me, my truck, and my sleeping bag), only to meet again some scant hours later. I had to take a quick jaunt to 7-11 for doughnuts and coffee before being seen in public. So, my first night at ToadFest came to pass.

Jaguar Goodies. Tom Harker (ICD) was all set up with *StarBattleSphere* and *AirCars*; and there were CatBoxes everywhere. He had *AirCars* (three versions of it) networked using three CatBoxes and what appeared to be regular telephone wire and RJ11 jacks. It was majorly cool. The CatBox is a class-act, and Tom is sweating every detail to perfection.

I'm not much of a game-player, and I am especially poor at maze games, but things like *Tempest*, *Asteroids*, and *Galaga*, I can handle. I looked at 4Play's *BattleSphere* and simply drooled. I love space games!

I guess on some level I realized these were polygon ships, but what Thunderbird has done with the gourad shading is pretty incredible. These ships ain't no sissy-ships. The screen that really caught my eyes was showing each of the ships in the middle of space (starfield and all that). The view of each ship was from a different ship that was moving very rapidly around the perimeter of the ship being viewed. The scrolling was as smooth as warm blackberry brandy. I am much impressed, and, if a Jaguar is in my future, it may well be because of this game.

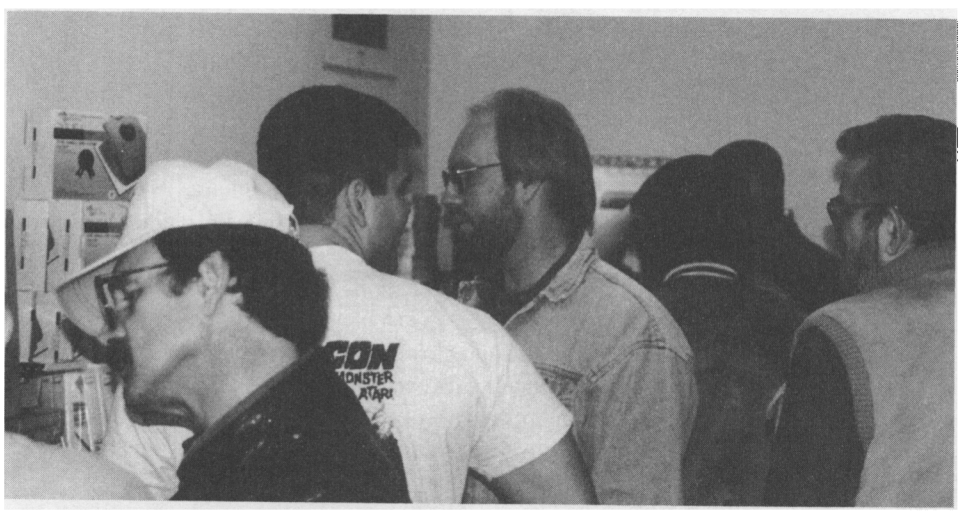
HyperImage Productions was there with *HoverHunter* (working title). I was talking to Jeremy Gordon of HyperImage, and I got to doing the math on the man-hours involved in getting *HoverHunter* to what we were seeing, and it came out to something like 1200 hours of coding (I guess they'd been working on it for a month or two). HyperImage is a relative newcomer to the Jaguar arena, but not to writing computer games.

Others said the scrolling in *HoverHunter* was "smooth," but to me it wasn't scrolling at all; it was flying, and it was very smooth. Jeremy is hoping to have *HoverHunter* released in the second quarter of 1995. It uses displacement texture mapping with over 65,000 colors and still has a frame rate of about 14 fps. It seems very fast, and is very, very smooth. HyperImage is currently working on four worlds, with four missions on each of these worlds. The graphics are pretty cool (like nothing I've ever seen before). The terrain really is three-dimensional, and it does not make use of polygons that I could see.

The Magazine. Then, Joe Waters was set up with his *Current Notes* table, and enough issues of *Current Notes* to choke a ditchwitch. It wasn't until much later in the show that I actually got to talk to Joe, and I'm hoping to get back up there to do a better job of meeting him. I enjoyed very much being able to meet the man behind the issues. ‹grin› I did notice that Joe spent some time tweaking around with *Calamus NT* (which Dave Troy had set up on a computer in the room with me).

ST/TT Goodies. Charles Smeton of NewSTar, Dan Wilga of Gribnif, and Roger Burrows of Anodyne were all in a large room showing off their wares. And what wares they were!

STraight FAX! (Charles Smeton's baby) is simply incredible, and up to version 2.20. You will find my in-depth review at *STraight FAX!* in this issue of *Current Notes*.



Attendees at the HolidayFest had a lot to see and a lot to buy!

Dan Wilga was showing off *Geneva/NeoDesk4* on a TT030 with a CrazyDots card. Nevertheless, it was astounding! When my TT shows up, I will be another candidate for this winning Gribnif combination! The way *NeoDesk* handles windows, program groups, split-windows, desktop pictures, etc. it very sweet. Very sweet, indeed.

I didn't get much of a chance to look at Anondyne's offerings, but I did notice that Roger Burrows was playing audio CD's from a

very nice control panel, and had a pretty interesting set up. I'm going to be sending off to him for more brochures on his products!

The MIDI folks were showing off the FalconRack (nice), and a bunch of Falcons running all manner of MIDI STuff. I'm not much up on MIDI, but I was very impressed. Everything from music videos, to music production, to bands, to MIDI application developers.

Spud Boy was there with his TT, showing off the most incredible renderings! This guy is an artist of the digital world if ever there was one! After seeing everyone with these marvelous TT030's, I was terribly smitten. So smitten, in fact, that this article is being typed on my new TT030, with my very nice TTM195 19" monitor. I am now in hog-heaven (in debt, too).

Plus Atarians Aplenty. I met many, many folks I've only talked to online. J.G.H., the Original Talking ParrotHead, B-Man, you name it. For me, the excitement of all the nifty displays was great, but meeting these folks was even better.

Towards the end of the ToadFest, there was a raffle held for the Jaguar game systems they'd received from Atari (just for the purpose of raffling them off!). It was a fine way to end the festive event. I'm not joking when I say "festive." No matter who I talked to, they all were having a great time. There were cookies, spiced cider (from the cider-lady), and loads of very friendly people.

You just don't realize fully what else can be done on these computers of ours until you see someone else using his computer. It did not sink in on me until another Atari user was watching me go through the process of using my own little 1040STe. Here I am, in the middle of reading messages in *Aladdin*, and when someone wants a copy of *ST Aladdin* on a floppy I simply pull down *MaxiFile* and copy the file for him. I also had *HotWire* and *MaxiFile* going in my usual swap-fest between *Calamus* and *Invision Elite*. The guy was shaking his head and grinning, telling me that he didn't quite have a "power user" setup like mine, and he wanted to know how I got my *HotWire* menus so nice.

It was all very easy to show him, and I love this kind of stuff anyway, but it was at this moment that I realized how powerful a thing it was to actually watch someone else at his own computer. If nothing else, I watched some other Atari users out there doing things I'd never thought of. Things I will soon be doing myself. I was there, looking at Spud Boy on his Cyrel-equipped TT030, grinning and shaking my head, just like the guy was grinning at my 1040STe. Yes, ToadFest was a great time!

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Where's Atari on the Infobahn?

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Hi!

First, I want to thank all the users and developers who took the time to come out to our Holiday Festival '94. It was truly a spectacular event. We had about 500 folks over the two days, and we raised about $500 for Habitat for Humanity with the Jaguar raffle! So the show was quite a thrill, the holiday season was hoppin' busy, and there's so much excitement over new, inexpensive products, like 540MB hard disks (finally under $300) and quad speed CD-ROM drives, that we've been busy non-stop–and things don't show any signs of slacking off. The economy, as a whole, seems to be doing well and prices on computer stuff are falling like crazy. Looks like '95 will be another interesting year.

And sadly, I once again had to tell Joe to run the issue without me last time. Between things at Toad and my finals at Hopkins, there was little time left to write anything for CN. But this was almost good, because it meant that I had more time to run across cool snippets and gems for this article. So, we'll see how it goes.

Linux for Your Toaster Oven

Last time, I talked about Linux, the public-domain Unix clone for 386/486/Pentium computers. For those of you who missed this discussion, I pointed out that the primary benefit of running Linux (besides, obviously, its open architecture associated with its being Unix) is the fact that it is a full 32-bit protected-mode operating system–meaning that the traditional 640K barriers, expanded and extended memory systems, and other downright silly aspects of traditional 386/486/Pentium DOS-based systems no longer apply. This, of course, is what Microsoft claims to be addressing (no pun intended) in Windows '95, but to retain DOS compatibility (which it must), we are going to be faced with at least some remnants of the "640K limit" for a very long time to come. So, in this regard, Linux offers a really different alternative to 80x86 owners.

Well, since we last spoke, I discovered something new which is in development: Linux 68K. What is it? It's exactly as it sounds! Linux for the Motorola 68000. Which machine? Right now, it's available for the Amiga and the Atari ST. (Mac folks will have to wait a little longer). Whoa. Right away this changes everything.

I mentioned Linux last time because it's cool. Linux for 80x86 is a non-conformist operating system running on a conformist CPU. Well, what does that make Linux 68K? It's a non-conformist operating system running on a non-conforming CPU! Obviously, then, Linux 68K is that much cooler than Linux for 80x86. Unfortunately (as is often the case when you're a computer non-conformist), coolness is inversely proportional to popularity. Therefore, the cooler something is, the less likely it is to be fully developed. (A corollary: Vaporware is infinitely cool.) And we can also derive from this that since Linux 68K is very cool, it therefore barely exists–at least when compared to Linux for 80x86 (less cool). Enough of this metaphysical babble, though–where does it stand?

Well, to find out exactly where it stands, I used the Internet to log into tsx-11.mit.edu, where Linux 68K lives. The developers of the Amiga, Atari, and Mac versions of Linux have agreed to post findings and software there (tsx-11 is also a major Linux 80x86 site), so this is really the "heart" of Linux 68K development. To find out the latest, I got a copy of the Linux 68K FAQ (frequently asked questions file). It would be great to reprint the whole thing here, but it's a bit large for that. I'll hit the highlights.

First off, Linux requires a PMMU (programmable memory management unit) to operate. Some of you may remember Dave Small's SST-era articles singing the virtues of the 68030 and it's PMMU. What's so great about a PMMU? It gives you "virtual machine" capability in hardware (which allows smooth multitasking without painful hardware hacks) and real memory protection capability. So with a PMMU, you can do multitasking in hardware by setting up what look to be several different physical computers, all sharing the same RAM, bus, and peripherals–without stepping on each others' toes.

Linus Toorvalds, who invented Linux, has said that he wanted to learn more about "virtual machines" and "protected mode" on the 80386, and that is what led him to write Linux. To port this fully multitasking 32-bit operating system onto the 680x0, it has been necessary to use only processors with "virtual machine" and "protected mode" capabilities. This all makes sense so far, right?

The first 680x0 processor with PMMU capability was the 68020, which required the use of an external 68851 PMMU chip. Well, since Atari never made any 68020 ma-

chines, you need not worry about this. Rather, you must have a TT030, Falcon030, an 030 upgrade board (support for the PAK030 is coming soon), or a 68040 machine (like a Medusa or Eagle). Furthermore, it is not possible to use 68EC030 or 68EC040 processors, as these have been emasculated by the cruel removal of their PMMU.

In addition to the PMMU requirement, Linux 68K also requires a 68881/68882 math coprocessor. While it is possible to emulate the math coprocessor in software (as has been done with Linux 80x86 for 486SX/386 processors, which don't have math coprocessors built in), the software would need to be written. This has not been done yet, but it is planned. So, the only Atari machine that can run Linux out-of-the-box is the TT030, right now. You can also use a Falcon030, if you buy a math coprocessor (not expensive).

Given that you have the proper hardware (030, mathco, SCSI hard disk), you're pretty much ready to go. Get the necessary startup files from tsx-11 and you're ready to start Linux. I would recommend using a spare hard disk that you don't mind formatting, because you'll need to erase it to handle the extended filesystem that Linux uses.

Getting Started

Because things are changing so quickly, it would be pointless for me to try to make this a review of or a "how-to-guide" about Linux 68K. If you're interested in trying Linux 68K, you'll need to do the same things I did. Log into tsx-11.mit.edu, download the FAQ, get the proper files, and be a pioneer.

Essentially, though, to get started, you'll need to download a TOS-based "bootstrap" program that loads the Linux "kernel" (the core of the OS) as well as a ramdisk full of utility programs. From there you can format your hard disk and set up your Linux system and files.

From Command Line to X-Windows

Linux, like Unix, is not much to look at. It's a command line. Type cryptic commands like "ls" to get a directory listing. Or use "grep" for searching. All the traditional Unix commands and protocols, like piping, work just the same as on the machine you used in college. It's Unix, pure and simple. To make things more exciting, you need an X-Windows server. X-Windows adds a complete graphical user interface to your Linux machine, and delivers the same kind of graphics that you'll find on high-end SGI and Sun workstations, and even runs the same programs–as long as you recompile them for Linux 68K. As the Unix/Internet world is pretty good about providing source code to programs (mostly available in Gnu C), you should be able to recompile many things using the Gnu C compiler available for Linux 68K.

The FAQ that I read was dated January 6, 1995, and listed the Atari X-Windows server as "on the to-do list." However, when I checked in today, I found that about 20 minutes before I logged in, someone had posted a new and updated X-Windows server for the Atari. The FAQ did not reflect this development, and I have not had a chance to try out X-Windows for Atari Linux yet.

X-Windows for the Atari is based on the Xfree public domain X-Windows implementation and should run on both the Falcon and TT. The irony of this is that Atari developed a complete Unix System V implementation, including X-Windows in 1991-1992. For whatever reason, they never sold this as a product. I know a few people who have copies of this, and I have used it at shows (like the Dusseldorf Atari Messe in 1991 & 1992). It looks great. Now it's been developed independently of Atari.

Other Unix-like Options

Eric Smith's MiNT, the basis for MultiTOS, has been around for years. From the start it has been an attempt to merge Unix-like filesystems and multitasking with a TOS compatible operating system. The bulk of Atari's work on MultiTOS has been adding GEM AES features that link into MiNT's underlying structure. Now that Atari has (ostensibly) given up working on TOS and the GEM AES, the focus has switched back again to MiNT. With the current version 1.12, Eric Smith (as a personal project, even though he is working for Atari on such Jag hits as *Club Drive*) continues to develop the core of the operating system, adding more Unix-like features, more "XFS" extensible filesystems, and greater stability. Incidentally, MiNT 1.12 will run underneath the existing GEM MultiTOS AES (GEM.SYS), and to my understanding is available free via FTP.

MiNT, as I have said, is very Unix like, and just as many 'C' programs for other Unix platforms can be readily compiled for Linux 80x86 and Linux 68K, those programs can also be recompiled for use under MiNT. In addition, my understanding is that there is also an X-Windows implementation for MiNT. I have not used the current MiNT stuff to tell you much about its capabilities, but it looks like a formidable Unix-like system that has got perhaps even more momentum behind it than Linux 68K.

The Internet

Undoubtedly, the Internet is one of the hottest topics of conversation in 1995. It's right up there with O.J. Simpson, Newt Gingrich, term limits and tax cuts. People who don't know anything about it are talking about it. It's become a buzzword, a culture, and a destination. IBM's *OS/2 Warp* includes programs to connect you to the Internet. There are many commercially available programs for connecting your PC or Mac to the Internet. Pick up a copy of the magazine *WIRED* and you'll find a complete journal of net-culture, replete with ads for Internet software, articles about the good and bad boys and grrrls of the net, and a "reinvented print media." The Internet is redefining media for computer communications. Businesses are clamoring to get an ad in edgewise, students are pushing the envelope by connecting coke machines and video cameras to

the net, and everyone and his kid brother wants to run *Mosaic*, or another graphical browser, to see the glory and the wackiness of that beast called the World Wide Web.

Online Services

With the Internet in bloom, are conventional online services dead? Don't count anyone out yet–it's too early to tell how things are going to turn out. Table 1 will give you some facts to chew on; it shows the memberships of the six largest online services at the end of 1994.

Table 1. Online Service Subscribers, 1994.

Online Service	Subscribers
CompuServe	2.45 million
America Online	1.5 million
Prodigy	1.2 million
Delphi	100,000
Genie	75,000
Apple eWorld	65,000

All of these services are doing their best to expand membership by promoting the "uniqueness," technical superiority, and cost effectiveness of their networks; while, at the same time, they are clamoring to give users access to the same, uniform Internet resources such as e-mail, ftp, newsgroups, and the World Wide Web. Table 2 shows how the services stack up on Internet services right now.

Table 2. Online Services and Internet Functions

Service	FTP	News-groups	E-mail	WWW
CompuServe[1]	Yes	Yes	Yes	No
America Online[2]	Yes	Yes	Yes	Soon
Prodigy[3]	Yes	Yes	Yes	Yes
Delphi[4]	Yes	Yes	Yes	No
Genie[5]	Soon	Soon	Yes	Soon
Apple eWorld	unk	unk	Yes	unk

[1] Using Compuserve's FTP & newsgroups facility requires the use of their Windows or Mac based CompuServe Information Manager software, which is not available for the Atari.

[2] America Online requires the use of a Mac or PC (running Windows or Geoworks).

[3] Prodigy requires the use of a Mac or PC.

[4] Delphi is text based and may be used on the Atari.

[5] Genie will offer full text based Internet access in 1995, but as of yet (Feb 1) it is unavailable.

Genie was promising full text-based Internet access by the end of 1994. Sadly, things didn't go as planned and this is still not done. According to a source at Genie, this would include access to VT100-based programs, like *Lynx* and *Gopher*. (*Lynx* is a text-based WWW browser, functionally equivalent to *Mosaic*, but not as pretty. *Gopher* is a menu-based information navigator, which is quickly being overtaken by the WWW).

Microsoft has announced its *Microsoft Network*, which is supposed to debut with *Windows '95* (Chicago), which should be out this summer. If Microsoft builds an online service into Windows, there is a good likelihood that such a network could have 20-30 million subscribers instantly. And if Microsoft gives these subscribers access to all core Internet services, watch out America Online! The other services will have a hard time competing with Microsoft's gargantuan economic scale and continual stream of cash derived from sales of *Windows*.

The other online services, which are becoming increasingly popular, are independent regional Internet access providers. Typically, these companies have several phone lines and a few computers that act as a modem dial-up "bridge" between individual PC's and the Internet. These services offer "PPP" (point-to- point protocol) or "SLIP" (serial-line-internet-protocol) access, which actually connect your PC to the Internet, as opposed to America Online or Prodigy which allow you to use your computer to "view" resources that are on the Internet. Admittedly, even at 28,800 baud a PPP connection is slower than the ideal. Many machines are connected to the Internet with Ethernet (10Mbits/second) or ISDN (128Kbits/second) or T1 lines (1.55Mbits/second). Nonetheless, a PPP connection is a real connection to the Internet, and once connected, a PC can run "client software" (*Mosaic, gopher, lynx, e-mail, Internet Relay Chat*) to get access to resources on the net. Or, you can run "server" software to make information available to others on the Internet (including people using cheesy AOL and Prodigy Internet gateways). This is a major distinction between a real Internet connection and the "viewing" possible on the major services.

So, we've established that being connected live to the Internet is a good thing. Furthermore, we know now that accessing Internet resources with the Atari could be difficult, since the only online services which offer text-based Internet access are Delphi and Genie (real soon now). So, what's a girl to do?

KA9Q/NOS

In the U.K., where Ataris are a little more respectable than they are here, there are some Internet service providers who have actually gone to the trouble to put together a PPP access package for the Atari. Try ftp.demon.co.uk and get their access package. Then call a local Internet service provider (I use Charm Net, which is operated from an East Baltimore rowhouse by a couple of young computer-nerds-with-venture-capital). Use the package to make your PPP connection to the Internet. *NOS* includes a built-in ftp, and as far as I have had time to see, should be able to offer e-mail, newsgroups, and possibly more. *NOS* (which began as an MS-DOS program called *KA9Q*) is a TOS based

program and relatively easy to set up and use. When you use the ftp built into *NOS*, files are saved onto your local hard disk (Why? Because you're machine is actually connected to the net.) rather than having them saved into some remote shell account from which you would have to download them via ZMODEM using *Stalker* or *Flash*. Again, this is the advantage of being connected to the net.

MiNTNet

Most Unixish systems have networking capability, network file systems, multitasking and the like. Well, MiNT is no exception. Just like Linux 80x86, there is a package which allows you to make a PPP connection to a remote site and "connect" your machine to the Internet. In addition to just making the connection though, there need to be client programs that you can run that take advantage of the network "socket" created by the installed network protocol. One such client, which has been compiled for MiNTNet, is "lynx," which, as we have already mentioned, is a text-based browser for the WWW.

Linux 68K PPP

My understanding is that there is PPP capability for Linux 68K at this time, as well. With this in mind, you should be able to run Lynx, FTP, e-mail and more from a Linux-equipped Atari. In addition, a little bit of elbow grease should enable you to recompile other client and server programs which work on other Unix systems for Linux 68K and even MiNT. I have not had a chance to verify Linux 68K's PPP functions, but I have used it under Linux 80x86 and can say it works great.

Prospects for a Graphical WWW Browser

Hypertext Markup Language (HTML, the underlying text-based core of the WWW) is extremely simple. It's plain ASCII, with embedded codes to denote headings, bold, italics, new paragraphs, horizontal rules (division lines), lists, and other typical text structures. Mixed in with HTML are instructions for "hotlinks" (pointers to other WWW resources or files at your site) and for embedded graphics. Here is an example HTML file:

```
‹html›
‹title›David Troy's Home Page‹/title›
‹h1›Dave Troy's Home Page‹/h1›
‹IMG SRC="./images/dave.gif"›
‹p›Dave Troy is an author for Current Notes magazine.‹br›
He likes to eat ‹A
HREF="http://www.sea.net/food.html"›seafood‹/A› and drink
‹A HREF="http://www.coors.com/killians.html"›beer.‹/A›‹br›
‹hr›
‹i›Updated Feb 1 1995‹/i›
‹/html›
```

This example may look a little confusing on the surface, but it's really quite simple. HTML is made up of under 100 "directives" that give information on how the document should be formatted. Typically, a begin directive is simply enclosed in "‹begin›" brackets, while an end directive is preceded by a slash: ‹/begin›. In this way, these directives act like simple on/off switches, or like parentheses, or like quotation marks.

Here's a quick guide to the meaning of the directives used in this example, plus a couple of extras:

‹html›...‹/html›	Begin & end HTML text. Not strictly necessary.
‹title›...‹/title›	Define Title for this page. Usually placed in browser window title
‹h1›...‹/h1›	Designate as Largest Heading
‹h6›...‹/h6›	Designate as Smallest Heading
‹IMG SRC="..."›	Display a picture file, filename specified by SRC
‹p›	Begin new paragraph
‹br›	Line break. (Must be specified).
‹A HREF="..."›...‹/A›	Specifies a "hotlink." Text (or graphics) enclosed within this structure, when clicked-on by user, will load the URL (uniform resource locator) specified by the HREF= text.
‹i›...‹/i›	Turn Italics on and off.
‹form›...‹/form›	Define an Interactive Form.

Quite obviously, none of this is rocket science. This is why it has been possible to write such a wide variety of browsers–graphical and text-based–from *Mosaic* to *Netscape* to *Air Mosaic* to *Lynx*, for a variety of platforms, including Windows, Mac, Linux 80x86, SGI and Sun.

In theory, it should not be difficult to write a GEM-based browser for the Atari. HTML does look better when it can use scalable fonts. So use GDOS, SpeedoGDOS, or NVDI for font display. No big deal. The GIF graphics found in most WWW HTML documents would look better on a 640 x 480 16-color display, so display them on those machines and turn them off for machines with lesser resolutions. No big deal.

The point is that writing a GEM-based HTML reader is nothing more than an exercise in programming, and it's nothing that someone who wrote, say, a word-processor shouldn't be able to handle. Much of the windowing, image placement, and vertical scrolling should use identical code. This is not the problem. People have been daunted by the need for a standardized PPP connection socket as part of a multitasking TOS filesystem, which thus far does not exist, to my knowledge. *NOS*, at least, seems to be proprietary and self contained. *MiNTNet* should be capable, but would require running the GEM AES to drive windows, etc, and I am uncertain if it is compatible with *MiNTNet* and can run at the same time.

One last option might be Linux 68K. With the development of X-Windows for Linux 68K and with its transparent PPP capability, it is not impossible that a version of *NCSA Mosaic*, or, if you want to really get crazy, Netscape Communications' *Netscape Navigator*, might be compiled for Linux 68K. But don't hold your breath. While both of these are available for X-Windows on Linux 80x86 (and work great, are fast, and downright sexy), it would take a lot of convincing to get someone at one of these big companies to recompile for Linux 68K.

Again, we are faced with the option of writing a browser from scratch. But we've already said it's not that hard. Perhaps someone with X-Windows experience would want to take advantage of Linux 68K's transparent PPP interface and write a browser there. It might be easier than having to reinvent PPP under TOS or MiNT. But nonetheless, this is not out of reach. There has been a lot of activity and discussion on comp.sys.atari.st (main ST USENET newsgroup) about writing various levels of browser, and it seems to me that it's just a matter of time before it's done.

Furthermore, I have heard rumors (which, as yet, are unsubstantiated) that ZFC in the Netherlands, the folks who make *Edith Professional*, are working on a GEM-based WWW browser. ZFC's web site is one of the "prettiest" Atari resources on the Net, and they seem committed to the platform. We'll have to see whether this comes to pass. In the meantime, if you're a programmer and want to have some fun, let me know. I think this is something which could really work and would extend the life of the Atari for a few more years.

Lastly, a bit of late breaking news. I got e-mail 5 minutes ago from a fellow in the UK who claims to be porting "Chimera," a public domain Unix-based X-Windows graphical WWW browser to the Atari, for use with MintNet and X11 Release 5. We'll see how this goes. This could prove to be the best answer for those who wish to use WWW on the Atari. We'll have to wait and see how this turns out.

Atari on the WWW

Despite the fact that it is not possible to use the Atari to browse the web graphically (and at its best), there are a surprising number of Atari resources on the Web. Several Atari fanatics around the world, who have access to Unix computers, PC's, and other machines which can act as web servers, have taken the time to "publish" documents, pictures, and "links" to other resources. As a result, there is a growing Atari community on the web, and the stuff that's available is of surprising quality.

Toad Home Page

Rather than try to point you to all the individual Atari resources I have discovered on the web, I will point you to a single web page that has links to the rest of the Atari web-world: my own. Find a computer with web access (don't forget that Prodigy now has web access) and go to:

http://www.charm.net/toad/

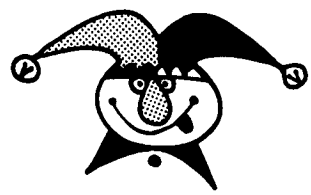
Here you will find Toad Computers' home page, where we are in the process of trying to get more and more marketing information online (an online catalog of sorts). In addition to some product information, you can request a print catalog, download my SYSINFO system and modem tester, view a Jaguar TV ad AVI file, see Jag game screen shots, and other stuff. We even have an interactive form set up where you can order clearance games! (More online ordering will be coming soon.) But most importantly, we've put in links that take you to other Atari resources on the web, and those sites have links, too. Within a few minutes, you can get point-and-click access to the bulk of the information available on the web. It really is pretty nifty.

Just as an example, there is an "unofficial" Jaguar home page, an 8-bit home page, a Lynx home page, an EMAGIC (Logic) home page, info from *ST Format* (UK) magazine, ZFC, a 2600 Games home page, a Linux 68K homepage, a *Calamus* homepage and many other efforts from both individuals and corporations. The beauty of the web is that anyone can publish his own documents there. It's not prohibitively expensive, the way printed matter tends to be. This has an effect on the quality of the publications on the net. As a rule, it tends to promote a greater variety of viewpoints while it also tends to produce a lot of unedited text. But, in the case of the Atari scene on the web, I am nothing but impressed with the quality of Atari related material on the web.

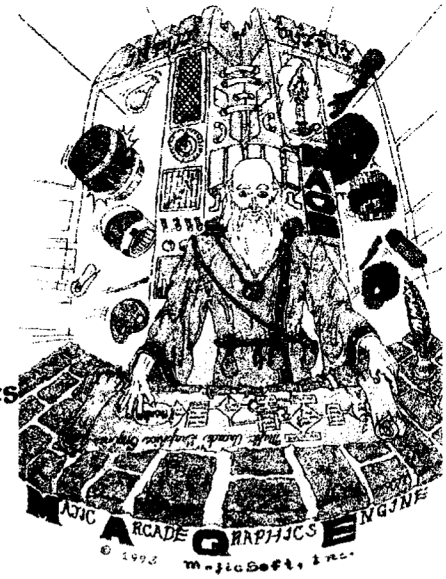
Joe Waters (our revered editor) and I have had discussions about transferring full-text archives of *Current Notes* onto the web at some point. While this requires a little more horsepower than is currently available affordably from charm.net, it is something that we could do if we decide to set up a dedicated web server at our location. Keep your eyes open. I predict that by the end of this year, Ataris will be able to access the web and that it will be the new center of online Atari activity. We will see.

To discuss PPP on the Atari, Mosaic, or why I'm wrong, the best way to reach me is by e-mail:

E-mail:	toad@charm.net
WWW:	http://www.charm.net/toad/
Mail:	Dave Troy
	570 Ritchie Highway
	Severna Park, MD 21146-2925
FAX:	(410) 544-1329
Phone:	(410) 544-6943



Majic Arcade Graphics Engine



M.A.G.E. is an incredibly powerful developers toolkit. Creating high quality commercial software has never been easier. Programming game software that used to take months, now just takes a few days! M.A.G.E. comes complete with everything you need to start programming your own commercial quality games. The package includes the latest version of the GFA Basic Interpreter, Compiler and Assembler on disk! The manual has over 175 pages of comprehensive step by step instructions on how to create games quickly. There is a Character Editor, a Map Editor, a Sprites Editor and an Animator and Inline Maker. The M.A.G.E. kernal loads directly into GFA Basic and allows you to effortlessly compile stand alone ultra high speed games. We also include two disk filled with over 1000 professional sprites. Order directly from us an we will include our developer's shell "ButtonzBasic" for FREE! *On Sale Now - $99*

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Dropix: *One or two player Tetris clone.*
Evader: *One player vertically scrolling arcade shooter.*
Hopper: *One player Frogger clone with new levels.*
ST Invaders: *One player enhanced Space Invaders.*
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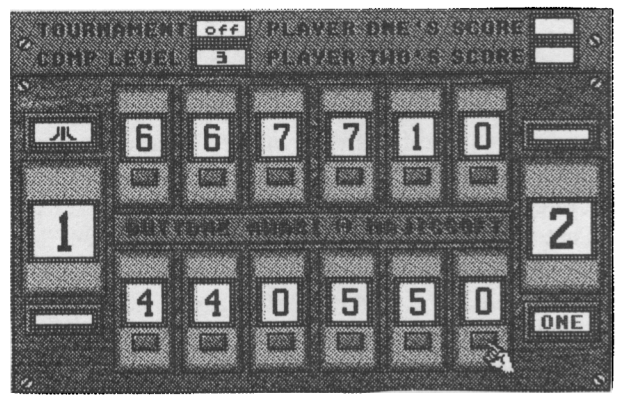
Sleuth: *One player enhanced Shamus clone.*
Thurg-N-Murg: *One or two player platform arcade blast.*

Suggest retail is $59.95. Order soon, get FREE shipping!



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MajicSoft - 348 Meredith Square - Columbia, SC 29223 - 803-788-8177

NAMM '95

Atari at NAMM??? Once again our friends from Atari were nowhere to be found at the winter meeting of the National Association of Music Merchants. I was told that James Grunke was lurking somewhere, but I couldn't find him. I did find Stephen Cohen and his merry band of Wizztronics guys ensconsed downstairs in Hall E. He was showing the **Falcon Rack**, which takes your Falcon out of its case and puts it in a box which can be rack mounted. The box has room for two hard drives, and a 5 1/4" CD ROM drive. You could get the basic box for $325, or add various accessories, like a 250 watt power supply for $75, a dual SCSI cable kit for $85, or a PC keyboard interface for $99. They were also showing the **Barracuda 040**, which is an accelerator board for the Falcon. This board will enhance your machine greatly, adding memory expansion up to 128 meg, enhanced video output to 1280 X 1024, 32-bit flash ROM for OS updates, and enhanced DMA control and access. The basic board retails for $800.

They were also representing a product called *Zero-X*, which is digital sound processing software. The software automatically loops samples, converts audio files to different formats, and speeds the transfer of samples to and from a sample-player. Stephen Cohen can be reached at: Wizztronics, P.O. Box 122, Port Jeff St. N.Y. 11776-4003. Phone: (516) 473-2507.

Finally, in the Wizztronics booth was the latest reincarnation of Hybrid Arts/Barefoot Software. They are now called Binary Sounds, and were demonstrating *SMPTETrack Platinum*, and *EditTrack Platinum*. Both sequencers are very easy to use, and I'm extremely happy that somebody has picked it up and will continue to support it. The gentleman I talked to promised a new facelift shortly, and said he would send me out a review copy. So stay tuned. At $149.95 for *EditTrack*, and $399.95 for *SMPTETrack* complete with synchronizing hardware, this is a significant value. For more information they can be contacted at: Binary Sounds, 431 Oak Dale Dr., Stafford, TX 77477. Phone: (713) 776-9118.

I wish both these companys luck. Hopefully, their enthusiasm will attract more developers to the platform, and we can carry on with our favorite computer for a long time to come.

IBM. The only computer company represented at NAMM was our friends at Big Blue. IBM was showing a notebook designated the 755CD. It has built in MIDI ins and outs, a DX4 running at 100mHz, 8 meg of RAM, a 340 meg hard drive, a DSP chip, a FAX modem, and a double-speed CD-ROM—all for a $4,800 list price. Wasn't there another company that put built in MIDI ins and outs on a computer once?

Otari. Well, onward and upward, here's the rest of NAMM '95. I have felt for a long time that the way to go with hard disk editing was to have a dedicated unit handling the processing, rather than depending on slots in a personal computer. Configuring the setups on a computer, and making sure that all the digital hardware is compatible with everything else running in your system is sometimes tenuous, and almost dictates that you have one computer dedicated to the task of digital editing. Well, as it so happens, there were other people who had this in mindalso. Otari was showing its **RADAR** (Random Access Digital Audio Recorder). The look and feel of the transport controls for this unit are exactly like those of a multi-track tape recorder. The unit comes in a basic 8 track configuration, expandable to 24, and there is a 1 gig hard drive built in, which provides you with about 20 minutes of record time. Editing is accomplished with the use of a scrub wheel, combined with cut and paste commands, so anybody familiar with razor blade editing should feel right at home. The basic package retails for $14,000, with each extra group of 8 tracks going for about $6,000.

Akai was showing the **DR8**, which is the 8 track version of their DR4d, which they showed last year. The DR8 has word clock/video-sync for digital synchronization, and is coming out shortly with an ADAT interface option that will allow you to transfer all 8 tracks simultaneously into and out of the unit. The retail cost is $4,995 with the optional ADAT interface to be announced. For the DR4d, Mark of the Unicorn has just come out with a piece of software for the MacIntosh called *WaveEdit* ($169), which allows the user to do things not possible on the DR4d, like Fade In and Out, Adjust the Gain, and Equalize Tracks.

Roland was showing two hard disk systems. The **DM-800**, an 8 track stand alone with its own mixer and two onboard 500 meg drives. They are pointing at the video post market with this product, which retails for $7,195. Their expandable unit is called the **DM-80**. It comes in a basic 8 track configuration and is expandable to 32. The basic 8 track unit goes for $6,995 with additional units of 8 tracks being added for about $3,000 each.

Fostex was showing a less expensive version of its Foundation 2000 called **Foundation 2000RE**. The big difference is that the unit is not expandable as far as tracks are concerned, and there is no internal mixing, and it retails for $8,995 For those who would like a to add automation to their Foundation 2000, they were showing the **DFM** (Dancing Fader Mixing System.) This is moving faders with automation for DSP, parametric EQ, panning, and compression/limiting. DFM goes for $9,995.

In the more affordable range, **Vestax** was showing its 6 track hard disk system called the **HDR-6**. This little box has a Digital mixer built-in that features 3 band EQ, and 4 Aux sends. There are extensive autolocation features, and you can combine up to 100 of the units for a total of 6,000 tracks. (Awesome) Unlike seemingly most everybody else, the Vestax uses IDE drives, which are cheaper and faster than SCSI. The basic unit with a 364 meg hard drive goes for $2,300.

Winning the award for coolest interface were the people from **Island Digital Inc**. They had a 16 track system, which featured the **TouchPro 16** touch screen. You just reach out and point with your grubby little paw on the screen and manipulate the parameters. The mixer includes faders, pans, gain, effect sends, solo buttons, and 8 subgroups, all automated. The unit comes with a one gig drive and retails for $8,995.

The biggest player in the hard disk editing field is still **Digidesign**. At their booth they had several third party providers showing such products as sound localization, voice processing, and peak limiting. All these products are called **TDM Plug-ins**. They are software based DSP processing modules that add extensive functionality to a TDM-based Pro Tools system. They told me that **Pro Tools III** for the Mac is now shipping with a price of between $8-$10, depending on the configuration.

For my current favorite hard disk system, the award goes to **Soundscape**. This is a stand alone 8 track system using IDE drives and an IBM front end for editing. Because all the processing is done in the box and not in the computer, you can use a 386 or even 286 machine for that matter. This, to me, is the ideal compromise because you don't have the compatibility and configuration problems of dealing with a computer, and, yet, you have the graphic editing function of the computer-based systems. The package goes for $3,250 retail with an option for using removable hard drives, which goes for an extra $325. This is great if you're quickly going between several projects at once. The only thing I didn't like about Soundscape is that they don't currently have an ADAT or DA-88 interface, but I'm told this is coming shortly.

OK, we've got our hard disk editing system, so now what we really need is a digital mixer. Well, as you may realize the hottest box on the street at the moment is the **Yamaha ProMix 01**. With this little guy you can have moving faders, automated EQ, panning, muting, DSP, and compression—all for under $2,000. That is, if you can find somebody to sell you one. The only drawbacks are that this is a 16x2 mixer with no digital input. This means that it would be really swell as a keyboard mixer, but as far as using it as your main unit, you're going to have to get several of them or patch like crazy. Also, while the unit has a 100+ dB dynamic range, it has only an 84 dB signal to noise range. Hmm . . . let's see, a Mackie 1604 has a 94 dB signal to noise, 4 busses and goes out the door for under $800; ah, but you wanted digital.

As long as we're talking digital mixers, I found one in the pro-audio area by a company called **Audio Media**. Their mixer labeled the **Tactile Technology M4000** has 8 group outs triple bussed to drive 24 tracks, 6 mono aux sends, 6 stereo aux returns, and digital audio I/Os. It is also fully automated, including all bus routings, auxiliary returns, channel faders, mutes, EQ functions and panning. The part I loved about this mixer was that, instead of having all the EQ and auxiliary send functions on every fader strip, there was one set of everything that you accessed with a button on the desired fader. In the 24x8 configuration with scene/snapshot automation only, the mixer was list priced at $33,000, and for the motorized faders it went out the door at $45,000.

Another company showing a digital mixer was **RSP Technologies** with their **Project X**. It had a similar configuration with the EQs and auxiliary sends in one area only, which could be addressed by all the faders. But this unit has a built-in conversion between the ADAT and DA-88 formats. The unit is 20-bit, has 8 aux sends, and, for the 32 fader model, was priced at $25,000.

The mixer that caused me serious fader envy, however, was the **Amek "Big"** by **Langley**. This is the current address for Rupert Neve, so a little reverence, please. There are compressors on every fader, 12 busses, and that incredible EQ. The automation has SMPTE and MIDI synchronization capabilities with a cue list that allows you to trigger external events, as well as recording fader moves, input mutes, and panning. But the coolest part is that, for the EQs, the computer stores a picture of the nob positions, which you can either match by looking at the screen, or Rupert Neve's own voice tells you which nob to turn next and by how much. I love it; here's Rupert going "lower, lower, lower, that's it." How much hipper can you get? All this for $40,000 for the 28-input model. Put it on my VISA.

Phew . . . I almost lost it there for a moment.

Back to reality. Over at the **Mackie** booth they were showing the new **OTTOpilot-16**. This is the fader pack that controls their automation unit and lists for under $500. Also, they were showing the **SR24.4**, which is basically a 24-fader 1604 mixer. It has 4 Aux Sends, 4 Band EQ, and 4 busses—all for a list price of $1,495. Are these guys great or what?

So, we've got out recorder and our mixer; now let's find something to play through them. Well, there's the **Kurzweil K2500**. This is the updated **K2000**, which blazed so many trails in synth technology. Some of the new features include 48 note polyphony, extensive sample processing, dual SCSI ports, software upgrades via Flash ROM, and up to 128 megabytes of sample RAM possible. Also, there are new DSP chips, which were always the problem with the K2000, and an interface for transferring data between the ADATs and DA-88s. There are three configurations with a 76-note keyboard, an 88-note keyboard, and a rack model. I was quoted a price of $3,495 for the rack model with a release date in the 1st quarter of the year.

At **E-mu** they were showing the **Emulator IV**. This unit features 128-voice polyphony compatibility with Emulator IIIx, Emax II and Akai S1000/1100 sound library, onboard graphic waveform editing, and discreet 18-bit D to A converters. There are four expansion ports, AES/EBU & S/PDIF digital I/Os and a SCSI link with dual 50-pin ports. All this for a list price of $5,995. If you are less concerned with upgradability, I think the ESI-32 is a better value. It is basically an EIIIx in a different box. It has two meg of RAM on board, expandable to 32 meg, and you can add a SCSI port, if you like. The sound library is huge, with over 50 gigabytes of samples available, and, at a list price of $1,495, this is one hot box.

At **Yamaha** they were showing a rack model of their VL1 called the **VL1-m**. This unit has all the incredible control features of the keyboard, in a rack model. Also, they were showing the **VL7**, which instead of having two timbres simultaneously like the VL1, has only one. Both the VL1-m and VL7 are retailed at $2,995.

All right, we've got out digital recorder, our mixer, and a sound source, so how about a little signal processing. **Alesis** was showing the **Q2**, which is their new flagship signal processor. It features Digital I/Os with 24-bit resolution. All the Q2's processing power can be spread out into multi-effects or focused to a single dense, smooth, reverb program. It has five seconds of delay time, a flat frequency response from 20Hz-20kHz, and a dynamic range of over 92dB—all for a retail of $799.

Lexicon was showing their new **Reflex**. This unit is meant to replace the LXP-1, but also incorporates features from their Alex. Reflex has algorithms, which include reverb with randomizer and early reflections, a tunable chromatic resonator, a plate, a gate, and a chorus. It is compatible with their MRC, meaning that edited reverbs can be saved and recalled. The list price is $499.

Now for stuff that I just thought was cool. **MIDI Solutions** had two MIDI merge boxes. These allowed the user to plug either four or two MIDI cables into one end and merge the data into one cable at the other. Most MIDI patch bays are gross overkill as far as what you really need to do, and this might be an inexpensive answer to a problem. They cost $129 for the four into one, and $79 for the two into one.

The folks at **Juice Goose** had a box that replaces all those little transformers that clutter up our power strips. The Volt Cube allows you to connect six different units of varying voltage and power types into this box. Depending on the color of the connection cord, the unit outputs simultaneously 9 volts AC or 9 volts DC, or 12 volts AC, etc. This is an interesting solution to a real problem; for under $200, it's worth looking into.

Marantz was showing their compact disc recorder the **CDR610**. With this unit you can cut your own CDs at home. This means instead of handing the clients a cassette, you can hand them a CD. Pretty impressive, and it will sound much better than the stuff your cassettes usually get played through. They claim that you can send the CDRs to a pressing plant directly, but I've received some late breaking news to the contrary. I think I feel a whole column coming up on this issue. At $5,500 this isn't a cheap unit, but I have seen it discounted as low as $3,500.

Sony was showing their **DA-88** clone. It's everything that the DA-88 is and more. Also, the price tag is substantially higher with a list of $5,995. But, hey, it's a Sony.

Last, but not least, my all time favorite piece at NAMM '95. The **Ultrafex II Model EX 3100** by **Behringer**. This unit is like an Aphex Aural Exciter, or BBE box, but on a much higher level without the distortion. It includes a Multi-band Processor, a Noise Reduction Unit, a Bass Processor with switchable frequencies, and an adjustable Surround Processor. This thing sounds great. I offered to marry the guy's sister on the spot if he would let me take it home with me; but he told me the retail price was $299, so I decided to forgo matrimony and seek out my local dealer.

There you have it, more NAMM than anybody has a right to see, all shoved into 16 back breaking, ear splitting, mind numbing hours. If you have any comments or suggestions for me, I can be reached at:

Gary Woods
6428 Valmont St.
Tujunga, CA 91042.
Phone: (818) 353-7418; FAX 352-6559.

Special Printer Characters and *AtariWriter Plus*

Helpful Hints For the Typographically Challenged

by Thomas J. Andrews *GENIE:T.ANDREWS16*

Atariwriter Plus is still the word processor of choice for many 8-bit users. And why not? It's versatile, easy to learn and use, and was, in its day, widely available. People, in general, and 8-bitters, in particular, tend to stick with the first word processor they find that fills their needs for as long as it does so, and *Atariwriter Plus* does an admirable job of that for most of us.

So What's the Problem?

AW+'s structure does impose some restrictions, however. One of these is in the area of special printer characters. Most dot-matrix printers are more versatile than the writers of *AW+* allowed for, with graphic, scientific, and mathematical symbols available with the right commands and data. The trouble is, *AW+* won't always give those commands and data if you just try using them in a straightforward manner.

I found this out last year, when my brother was helping my future sister-in-law prepare her resume. (If all goes as planned, by the time you read this you can cancel the "future" part.) She wanted to emphasize certain points by putting "bullets" in front of them. For the information of those who don't know, a "bullet" is a filled circle, like this: •. This character is not in the standard ASCII character set, but my Epson LX800 has such a character available, in two sizes. I suppose you'd call one a bullet and the other a "BB". These characters are at positions 249 and 250 in the "Epson Character Graphics" set.

My brother uses *AW+* because of the "Print Preview" feature. I'm a *Speedscript 3.0* man myself. As I said, each settles with the first one that meets his needs. (All right, I suppose I should move on to *Textpro*, the more modern incarnation of *Speedscript*. Well, if somebody would write a complete, comprehensive manual with a good index and command summary, I might consider it. Hint, Hint!)

In ATASCII, characters 249 and 250 correspond to inverse "y" and "z", respectively. You can't just put an inverse y in where you want a bullet, though, because *AW+* interprets inverse characters as regular characters to be underlined. Instead of a bullet, you get an underlined y.

The first thing we thought of doing to get around this was to use the [CONTROL][O] command, which is supposed to insert a character with the ASCII value you specify. It didn't work. We still got an underlined y.

So How Do You Do It?

More drastic measures were called for, and they succeeded. It took a little planning, but I think it was worth it.

The first step is to type in the document. At every point where you want a special character, type a standard character that isn't used elsewhere in the document, or at least not used very often, as a stand-in. Choose an odd piece of punctuation, like @, ›, ‹, \ Use the same substitute each time you want that special character, but try to use a different one for each different character you want printed. Don't use inverse characters.

Next, SAVE a copy, just in case. You might not need it again, but you never know. Then, PRINT a copy to a disk file. If the document is very long, split it up into several 2- or 3- page segment files. This does all the formatting for you with space allocated for the special characters.

Now, LOAD the printed file, or first segment, back into *AW+*, replacing the original. If you want to get an idea of what your document looks like, use the [OPTION][C] command to expand the display width to a few characters more than your document width. The regular Print Preview feature won't work properly on this file. Some of the document lines may seem out of alignment, especially if you've used things like underlining or font changes. This will be due to the presence of printer control codes. Remember, these codes won't appear on the actual printout, so just imagine them as not being there and the alignment will seem better.

Use the Search and Replace functions to exchange the substitute characters with the ones you actually want to use. You can go ahead and use inverse characters here. In fact, you must if you're to get the right value to the printer. Use a good ATASCII reference chart and your printer manual to determine the proper characters and/or keypresses to use. For those characters that correspond to control functions like INSERT, DELETE, or the arrow keys, or for keypresses that have *AW+* command functions, press [SHIFT][ESC] before doing the appropriate keypress. The only character you won't be able to use is RETURN, CHR$(155). Your interface will change that to a CHR$(13).

Don't use the [CONTROL][O] command. It only works during the PRINT function, and you won't be

(Continued on page 67.)

The MajicSoft Ten-Pack: Part 2

Kid Krazy, Super Dark Pearl, and Thurg-N-Murg

Review by Sam Van Wyck

This Is the "Something New" Part!

Last time, we covered three games that should have been familiar to anyone who was alive and minimally functional during the first ten years of computer and arcade gaming. Now, let's look at three games whose concept, while not totally original, is not immediately recognizable as a recreation.

Kid Krazy: *"Simple Arcade Fun with a High Addiction Rate!"*

My kind of game! Well, almost. *KK* is a platform-jumping game requiring your player (Kid Krazy) to move from one level to another collecting rewards of various kinds. Naturally, there are a few frustrations, mostly in the form of little round bad guys who kick your player into oblivion should they manage bodily contact. The only sure cure for this is evasion which, in most cases, is relatively easy. Also, the possession of a Majic Mallet allows the bad guys to be mashed for extra points and glory.

The controls are simple and easily understandable, even by persons over the legal age of consent. Move the joystick left—player goes left; joystick right—player goes right; joystick up—player goes up; joystick button—player goes way up. That's it! Additionally, the game speeds can be varied from Slow through Normal to Fast, depending upon one's dexterity and the degree of challenge desired.

A different platform appears after each round, along with more of the bad guys and a few special goodies to increase Kid Krazy's speed or make her invisible. (Please note that the decision to designate the onscreen player as female is strictly the notion of this reviewer and not necessarily the intent of the publisher.) An on-screen timer awards bonus points to any who can clear the decks quickly.

High scores are saved to disk along with the name of the contender.

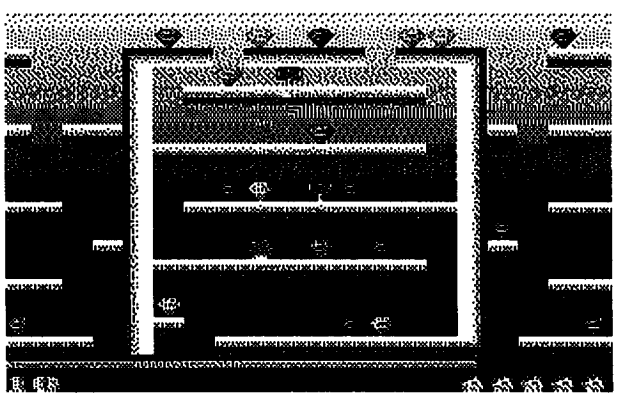
The sound effects are minimal but adequate to punctuate movement and events and provide good audio feedback to enhance the screen action. Colors and motion are excellent, certainly in keeping with the standard set by the publisher in the other games in the set. Quite frankly, although this particular game is somewhat rudimentary in terms of play, the technical details, such as scrolling and control response, are all that could be desired.

Gameplay itself is somewhat simplistic and repetitive. There are a few surprises and interesting twists but, after a few rounds, it was nice to have another nine programs to look forward to. I think this is one for the rugrats in the crowd.

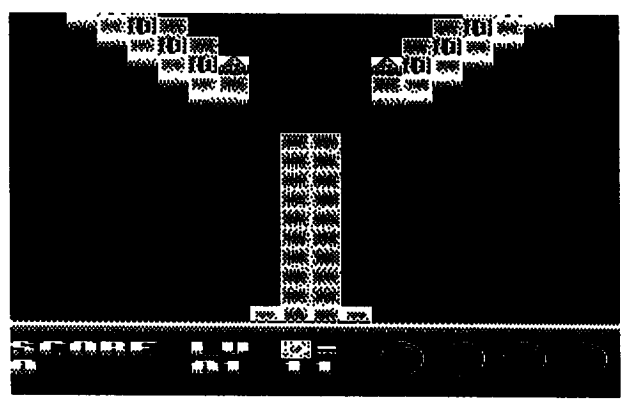
Super Dark Pearl

This game requires a great deal of patience, skill, the ability to adapt quickly to an ever-changing playfield and a ration of good luck. The idea is to bounce a black marble (OK—pearl, already!) across a downward-scrolling field containing scattered point rewards, unknown bonus/hazard tiles and the mandatory jewels that have to be gathered before moving to the next level.

There are no option buttons in this one; no easy mode for old folks. The bouncing ball begins as the



KID KRAZY – Another platform game. Pick up the goodies, avoid the baddies, live long and prosper.



SUPER DARK PEARL – Keep the Dark Pearl bouncing from path to path, hit the scoring tiles and NEVER, EVER, fall off!

screen scrolls downward and it is either kept on track or falls into limbo. Five balls and you're out! Keeping the ball on track is difficult; pinpoint accuracy on a consistent basis borders on impossible.

However, assuming that a player can manage to collect all the jewels scattered across seven screens of disconnected track, then a reward is earned: progress to the next level. There are ten levels in all with levels four and eight being bonus rounds. Round eight lets you shoot back at some of the nasties, and by that time you'll be ready to!

A very nice feature of *Super Dark Pearl* is the ability to jump to and practice any level, one through ten. High scores are not saved in this mode and that is the only departure from the actual game.

Of all ten games, this one appeared to be the weakest in both concept and playability. However, being unwilling to depend upon the negative opinion of a single reviewer, we enlisted the services of Mr. Dan Brown, gamer extraordinary, to render an independent evaluation. While his scores were markedly higher than the writer's, his opinion was about the same: Why bother? *Super Dark Pearl* simply does not match up to the entertainment quality of the other nine games in the pack.

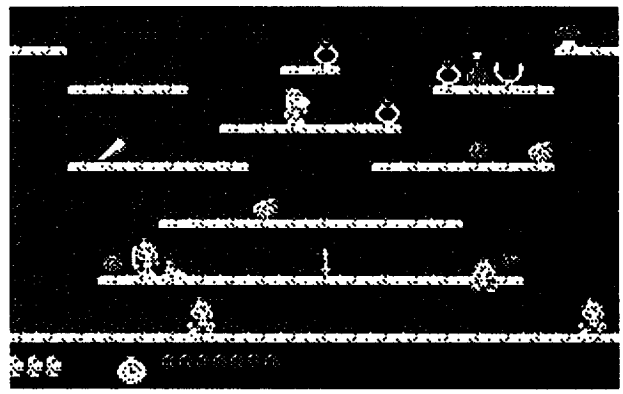
Thurg-N-Murg

Our third game for this issue is a restatement of the platform/gathering concept. The challenge is familiar, being to guide your character along a series of disconnected platforms while gathering assorted, randomly placed goodies and avoiding a bunch of wierd animals, all of whom can cost a life upon contact. Not the most original of concepts, but not badly done, either.

Extensive setup choices seem to be a hallmark of most MajicSoft games, a feature greatly appreciated by all who have seen these products. *Thurg* is no exception. It allows both single and cooperative two-player mode, child/adult handicap, music on or off, ditto sound effects and even allows you to play it on a machine running on 50 cycle power.

The character(s) can move forward and back, jump, of course, and in this one, shoot back. Piles of goodies lie about the structure begging to be picked up. Some grant only points while others enhance speed, jumping ability, firepower and defense.

Opposing our heroes are six varieties of bad animals: monkeys, dragons and a seriously dysfunctional bunch of rabbits. All have different abilities and a wise player does well to plan which to avoid and which to attack at different times. While the play is largely arcade action, there is room for the planner, as well. Indeed, strategy is the key to high scores. Hidden screens are rumored to exist and they remained



THURG-N-MURG – The opening screen of this platform game is easily conquered. The next few aren't quite so easy!

totally hidden for the duration of this reviewer's efforts.

Control seems to be a bit touchy, but not impossibly so. Motion is smooth and predictable. The music is OK and can be turned off (THANKS, MS!) along with the sound effects.

Thurg is a good game concept. Of the three, it is probably the best, if only for the large number of play options available. Its appeal will again be greater among the rugrats in the family rather than the adults.

All three games are from MajicSoft, 348 Meredith Square, Columbia SC 29223 and are part of a ten game pack. The final four games will be covered in the next review.

Special Printer Characters *(Continued from page 65.)*

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using that again. If you need to use software printer commands to turn a font on and off, be sure to insert them just before and after the special characters. You didn't do this before because it would have thrown the formatting and word wrap off in the printout.

Finally, use the SAVE ASCII function ([CONTROL][S] from the main menu) to send the file to the printer or to another disk file. You can send it directly to the printer by using P: when asked for the file name and "yes" to the "Replace Existing File" question. If you send it to another disk file, you can print it by copying it to the printer from DOS.

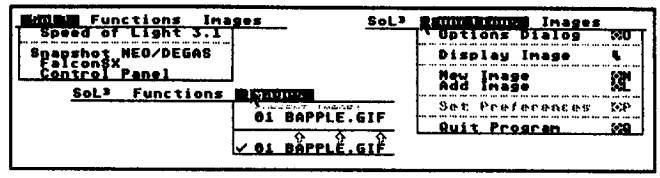
Conclusion

If you've done everything correctly, your document or segment should print out, complete with special characters in all the right places. Repeat from the Search and Replace step with the other segments to finish the document.

Another triumph of intellect, ingenuity, and perseverance over seemingly insurmountable program limitations.

Speed of Light

Review by Scott Tirrell



Speed of Light, shareware from Stusoft, is an image viewer and processor packed with features. Although *Speed of Light* comes with a 28-page, single-spaced manual, the author claims that he did not have time to describe each feature with enough detail. Describing all of these features in the confines of this article is impossible, but I do hope to highlight all of the important ones.

It Views, It Converts!

Speed of Light supports quite a few graphic formats. *SOL* can load and display GIF, JPEG, Degas compressed and uncompressed, Prism Paint and IMG files. *SOL* can save pictures in all of the above formats except JPEG. This impressive array of supported formats not only only insures that *SOL* can view that picture you got from your friend but it also makes *SOL* a very handy tool for converting picture files from one format to another. *SOL* has been very handy in converting files into IMG format for use with my desktop publishing program, *Fleet Street* (Scott, I think it's time to get a new DTP program – Paul).

As a plain viewer, *SOL* does a great job. All file formats load in very quickly. No longer does an Atari ST user have to be jealous of *C-Show* and other GIF viewers on the IBM. *SOL* also has tons of tricks to make the picture loaded look better on your machine. On a 16-color ST, images can be flickered to allow the use of more colors. This flickering can be controlled via a slider bar and has a range of 0-255. *SOL* also allows the picture's histogram to be edited, the number of colors in the picture to be decreased, dithering of the picture, and many filter effects to be performed on the image. *SOL* also can display in greyscale, can resize and crop pictures and zoom in and out on pictures. If the picture does not look very good upon loading, *SOL* contains tons of tools to help you make it look better!

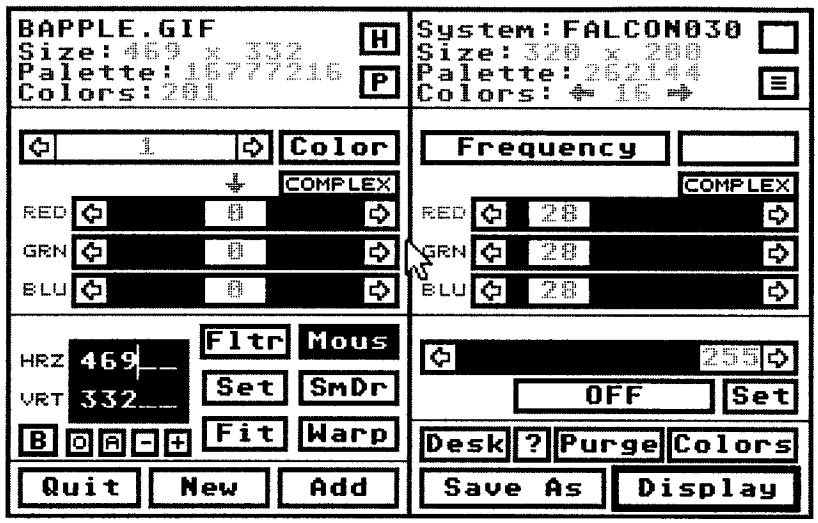
But Wait, There's More!

Dithering is a very powerful feature in *SOL*. In the *SOL* menu there are five dithering patterns to choose from as well as an option to load a dithering pattern. *SOL* comes with ten dithering patterns on disk to choose from. Some of these patterns are pretty exotic, such as FLOWERS.DIT, and produce very interesting effects. The gradient of the dither pattern as well as the dither contrast can be adjusted with a slider bar. The dither pattern is displayed in a small window above this slider bar and changes when these values are changed. With 15 dither patterns to choose from, as well the ability to change both contrast and gradient, tons of variations are possible.

Filter patterns are also available in *SOL*. Filtering is an effective tool to use on pictures that have had been altered size-wise. For example, zooming-in on pictures causes pixilation, or a blocky image, while reducing a picture to, say, fit the screen, causes lines to be lost from the picture.Filtering in *SOL* helps correct these problems. There are six different filter patterns: box, triangle, cubic, b-spline, mitchell and Lancose3. Some are best used for reduced images, others are better for enlarged images. Filtering certainly does help an altered picture look more like the original. However, as the manual warns, filtering is slow. One way to speed things up is to use greyscale display instead of color. I also recommend that one does not filter an image larger than the screen. Not only does it take longer to process, but scrolling about the image is painfully slow. Each time the user wishes to move onto another portion of the picture, the image is painstakingly drawn to the screen. Filtering is very useful, but be willing to wait awhile.

Another option to smooth the image of a picture is to enable Smooth Draw. It takes much less time than filtering; on the other hand, I could not discern much of a difference when Smooth Draw was at work. *SOL* contains an extensive array of tools to alter a picture's color palette. The histogram of a picture is simply a mouse click away. The histogram allows the user to change the red, green and blue values of a picture. With the RGB values, users can brighten or darken certain colors by simply lowering or raising the red, green and blue levels. The user may also brighten the picture by raising all three colors or darken the image by lowering them. A few buttons in the histogram that help with the editing are stretch, squash, invert and flip. Very interesting effects can be obtained through the editing of a picture's histogram. Fortunately, things can be set back to normal by clicking on a down arrow icon. One other function includes "gamma," which brightens or darkens an image without the side effect of having image "washout."

The color map of an image is also readily available to the user. The color map displays the picture's palette. The colors are all easily alterable by clicking on them and changing the red, green and blue values.



The color map editor has many other functions as well. The user can swap colors (switch their place), copy a color, flip the first color and the last color in a selected area, rotate the colors to the left or right, gradient, and sort from dark to light and from light to dark, among others. There are many things to fool around with here. The color map is obviously very useful for those who want to change a certain color in the image. Any mistakes made can easily be corrected by rescanning the image's color map.

Resizing an image in *SOL* is well supported. Cropping, zooming, reducing, and fitting a picture to the screen are all supported in *SOL*. *SOL* does all of these functions quickly. Beyond these features is the ability to flip a picture horizontally and vertically. The size of a picture can also be changed by entering in the numerical size of the picture (example: 320 x 200) and this is helpful for those who want an exact sizing. A handy use for this would be resizing a picture for another resolution.

Interfacing at the Speed of Light

Of course, there has to be a way to access all of these functions of *SOL*. *SOL's* interface is quite unique. There arereally three different ways to interact with the program. There is an option menu (Figure 1), a GEM interface (Figure 2) and a pop-up menu. The option menu is merely a large dialog, which has buttons and sliders for about all of the program's functions. The GEM interface is a little sparse. Its purpose is to allow multitasking users to get to the desktop. The pop-up menu is called up while viewing the picture by clicking the left mouse button. This menu lists most of *SOL's* options. I really think the pop-up menu is useful. It is nice to be able to quickly click on a tool without having to go back to the options dialog. *SOL* also includes a preferences dialog, which the user can use to setup *SOL* to his/her liking.

That's a Wrap

SOL is a very powerful, well-written program. For anyone who views and works with pictures, *SOL* is a must try. This is one of the best things about *SOL*: it is shareware. I only have a couple of suggestions for the improvement of *SOL*. More options should be accessible under the GEM interface. I personally like the GEM interface. I would also like for the pictures to be displayed in windows. I want to see these improvements to make *SOL* more friendly to multitask with. Related to this, when quitting *SOL* under MultiTOS, I get left with a white screen. This can be fixed by enlarging a window to fit the screen and then closing it, but it is annoying. With these minor complaints aside, I can recommend *SOL*. At least try it. It is an incredibly useful program. I cannot say anything bad about the tools in *SOL*. They all work and work well.

Speed of Light is available from StuSoft for at least $25. The address is: Stuart Denman, 1751 N.E. Naomi Pl., Seattle, WA 98926. Mr. Denman's e-mail address is: sdenman@cs.washington.edu.

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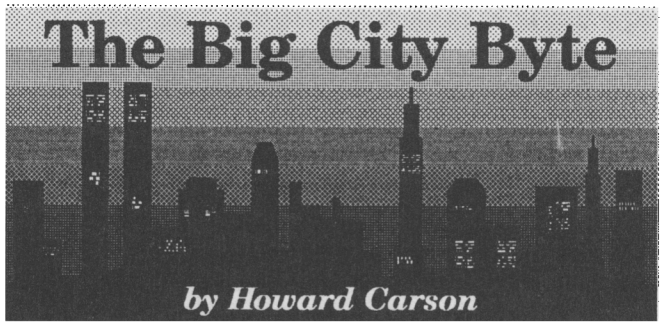

"THE BEST PLACE TO GET ADVICE"
or
"HEY ... let's be *careful* out there!"

Advice. It's a curious thing.

No one has ever determined the exact sources of all the best advice they've ever received. That is not surprising, considering the best advice is rarely handed to any of us. Most often what we perceive to be the best advice is a distillation of many bits and pieces of wisdom and common sense, gleaned from people and our experience.

Serious consumer advocates tout general concerns these days. Rarely are specific concerns delineated—too many potential lawsuits apparently. The best of the advocates supply us with gabion and fascine against the ophidian attitudes that dwell, camouflaged, in the marketplace. The best of such advocacy often filters out to the rank and file of any socio-economic strata at a speed that can only be described as agonizingly glacial. Before one accepts advice of any kind, however, it is wisest to confirm the efficacy of the source. Always. BBSs and other online services have become a singularly effective source of Atari support . . . and a source of dangerously useless advice and irritation, as well.

For example:

✍ Never accept advice on Falcons, from someone who owns a TOS 1.60 STe (with a bad DMA chip, yet—there are still a few left), two meg of RAM and a baseless, but abiding, hatred for Atari Corp.

✍ Never accept advice from anyone who claims that most Atari software doesn't run in ScreenBlaster resolutions. A huge pile of Atari software, new and old, runs perfectly in ScreenBlaster modes.

✍ Never accept advice from anyone who whines about the high cost of upgrading his nine-year-old TOS 1.0 ST, 1 meg RAM, no external floppy, no hard drive. This is usually a person who is so tight, he squeaks. He is a person who likely agonizes over the high price of bubble gum, too.

✍ Never accept advice from anyone who says the Falcon is a stupid computer. It isn't. It's brilliant, elegant, fast and upgradable, too!

✍ Never accept advice from anyone who spends all of his time ranting and raving about the failures of the Tramiel family and Atari Corp in general. Ten years is a long time to be sounding a death knell. Anyone who has not yet gotten the message that the Tramiel's *aren't* stupid needs a serious attitude adjustment.

✍ Never accept advice from anyone who doesn't understand that many of us have chosen Atari because it *isn't* mainstream, in the first place. We don't want to be just another clone.

✍ Never accept advice from anyone about the purchase of software, based solely on his perusal of a package on a storeshelf. Package copy is specifically designed to extract money from someone's pocket.

✍ Never accept advice from anyone who says Atari has just sold TOS to some other company ... and then says (the following week) that Atari has sold TOS again, to someone else. Atari doesn't sell TOS . . . it licenses the *use* of TOS. Trust in the fact there is a huge difference between selling something, and licensing its use.

✍ Never accept advice from anyone who claims to be running three major applications under Geneva and NeoDesk 4, in one meg of RAM. Unbridled enthusiasm is one thing; abject B.S. is another.

✍ Never accept advice from anyone who claims the GEnie BBSs are intuitive, accessible and reasonably priced.

✍ Never accept advice from anyone who says Atari files will never be compatible with DOS/Windows/OS2 applications; they already are . . . darn near all of them. People who espouse such balderdash are often woefully uninformed, possessed of only the barest minimum of computing technology and penurious in the extreme—to the point where they don't even spend enough money to buy the odd magazine, containing appropriate reviews, technical details and so on, that will bring them up to date.

✍ Never accept advice from anyone who expounds on the virtues of UNIX, as the wave of the future. UNIX serves only to further separate academia and corporate hegemony, from the mainstream of human existence. The Internet can be fascinating, of course, but it is *not* the mainstream of human existence!

✍ Never accept advice from anyone who spends unhealthy amounts of time complaining. If the complaints are so well-founded, the sufferance should be immediately directed at the alleged progenitors of the difficulty—not other Atari users trying to find help and support. Those individuals who rant and rave at users who are merely looking for a little technical help online are often individuals bereft of common sense, maturity and . . . well, lives. AVOID THEM AT ALL COSTS. They will, of course, suggest you are burying your head in the sand, because you aren't listening to them—but that is a specious, self-serving and venal attitude. These sorts of individuals are generally in need of professional psychiatric attention. They cannot conceive of why anyone would want to disbelieve their ravings.

I could go on.

Sorting fact from fiction is an art form. Such winnowing is even more difficult when the information being ex-

amined is gleaned online. And the whole process is elevated beyond the realm of reasonable expertise, when juxtaposed against the ease with which many ill-informed, ill-tempered people spread misinformation and outright lies, online. The guilty parties should be soundly thrashed and sent to bed without their suppers.

This is a pervasive problem. The online communication systems have turned into Gossip Malls. None of the large corporations, small companies and private individuals, whose salient characteristics are being lauded or deplored, have the wherewithal to explore all of the online areas where such things are discussed (read: everywhere) in order to dispel, defend or confess to the burgeoning myths. There are now thousands of areas on BBSs, in newsgroups and online services where myths are being disseminated and no one can keep up with all of them. It seems the old children's game, "I've Got a Secret," has taken firm hold. The myths grow exponentially as poor information and nonsense is passed 'round the electronic circle.

There are individuals who logon to many online services, whose advice we can trust, however. They are people who seem less concerned with the business mechanics of a particular corporation, than with the essential ability to achieve efficient and creative results (at work, pleasure, hobby or avocation) with software and hardware available to Atari users. Certainly, they are easy enough to identify. They're known by a willingness to help, a positive, encouraging attitude, and a degree of common sense that is unmistakable. They are people who rarely insist on anything. And though they may explain things in great detail, final decisions are left to the listener or reader. They are also people intent on earning a place among their peers by virtue of accomplishment, rather than salesmanship. Though salesmanship may be important, it is worthy of note that the most successful teachers do not force knowledge on their students—rather, they try to lead their students past the repositories of knowledge, encouraging exploration and experimentation, while providing firm guidance. The best guidance merely takes the form of saving others from having to rediscover the wheel too often.

When searching for advice, of course, we must also not reveal to any potential advisors a propensity for being "led." If we suggest our own incompetence through poorly phrased questions, or vague descriptions, we have no one but ourselves to blame if some online enthusiasts decide we're suddenly fair game. Remember that far too many people, in all walks of life, constantly look for opportunities to impress others. It is a policy of self-affirmation and ego building, which fails to take into account concomitant damage done to others during the pursuit of self aggrandizement.

More simply put ... "If you leave yourself open for a left hook, someone will surely throw it." Go figure. Sysops at all levels of service are letting things get out of hand. Too many Atari users are logging on to local BBSs and commercial online services and are subscribing to certain newsgroups, creating situations that resemble nothing so much as Atari Hate Fests. Support for new users (there are *plenty* of them!), practical, technical Q & A and other information interchange is being ignored in many online places. In addition, too many grumpy people have forgotten that, though they may only view a single screen when typing some goony message, that message is often read later, on *thousands* of screens.

Govern yourself accordingly. It is *not* necessary to act like some moronic, obsequious, pandering optimist. It *is* necessary to remember that a positive, enthusiastic, gentle attitude is most often the greatest aid to personal creativity and personal growth. Remember, too, that not one single opinion ever offered about Atari's business practices has ever been taken seriously by anyone at Atari. Yet, Atari apparently has cash in the bank and a booming new product; Falcons are being produced, TTs are being produced and they've done the smart thing and finally gotten out of the PC business (you did know that Atari produced DOS boxes, didn't you?). If Atari does not live up to some industry standard that you believe to be extant, don't despair online. It depresses a lot of people. It prevents the online systems from being used for needed support. It scares people away from the platform, needlessly—people who would be best served by a thorough knowledge of Atari computing. In days gone by, despairing notions expressed at typical social gatherings were "de rigueur." They could be dealt with via rational discussion. We cannot transfer that social convention to online gatherings: too much is misunderstood, too much is misinformation that can't be dispelled, and too much is self-serving twaddle that can't be deservedly ridiculed due to the lack of physical contact and presence. There are many who seek to make the forums a more constructive, accurate foundation for the exchange of ideas, help and opinions. There are others who regard the online forums as nothing more than pedestals from which monumental egos can be displayed.

Always choose to associate with the group most likely to be of greatest benefit to your quest for knowledge, education, peaceful coexistence and productive, enjoyable Atari computing. The choice is an easy one to make, and ultimately satisfying.

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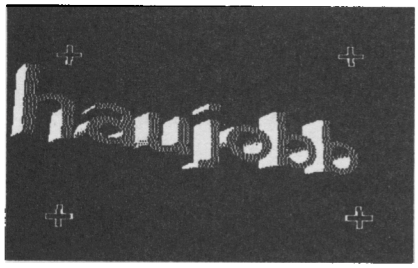


The band's logo was created from a 3-D font.

Haujobb and the Atari ST

David Phillips

I have been enthusiastic about Atari computers since the first time I played Combat on the 2600. In 1988 I needed a computer with built-in MIDI ports, and the ability to create 3-D graphics. I bought a 520ST and had its memory upgraded to two and a half meg. Actually, I think Atari is still the only company, to date, that has created computers to have both options in a single unit.

For almost two years, I have been using that ST to create graphics for industrial music dance nights in clubs. Some friends and I go into a club, set up the stage with ten to twelve televisions, and play electronic and industrial music. These "CyberFlesh" nights can attract hundreds of people a night, while other clubs aren't doing so well. A friend and I are responsible for creating the VHS tapes that we use for the nights. From the start, I figured that I could use the ST to build 3-D logos, set them spinning, and splice in other footage. No big deal, right? Funny thing is, at the clubs, those interested will always come up to me to ask how the graphics are created.

"That's an Atari ST, the music computer," I say.

"You're kidding!," they tell me. "I can't do anything like that on my PC!"

This happens ALL the time. And these are people either in the graphics field, or studying film and video in school. Impressed at the graphics of a music computer, huh.

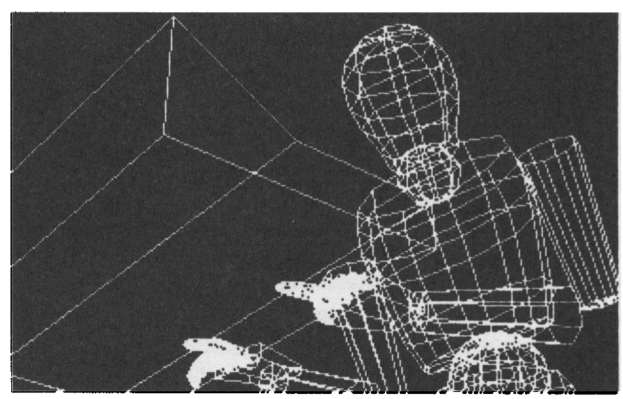
Now here it should be said that any computer you buy, a Mac, PC, or whatever, is capable of doing some beautiful things. Video Toasters are nice if you have five thousand dollars, and other computers take too long to use. I've tried to build objects in the PC world, and it's ridiculous. The ST, when set in its low resolution, is good enough to do complex wireframes, without waiting overnight to render. I like wireframes because they could only have been created on computer. The Listerine commercials are technically amazing, but the bottles look the way bottles appear in reality, so why take days to render them that way? (Yeah, I know, the bottles themselves are animated, but I'm trying to make a point here). Some people like computer graphics to look like computer graphics. Enter Haujobb.

Haujobb is a German-based synthesizer band that was looking for a record label to release their debut album in America. They sent a copy of the album to Isolation Tank, a mail order company in Jenkintown that specializes in getting electronic music you can't find anywhere else in the States. PenDragon Records heard Haujobb's album and won the contract to release it domestically. While the band's manager was in the country recently, the owner of Isolation Tank showed him the local dance scene where a CyberFlesh night was in full swing. Guess who wanted to know how the graphics where created?

In a diner a few hours later, I talked with Stefan, Haujobb's manager. He asked if I was interested in creating the video portion of the band's live show. The first thing I thought was that wherever they tour, people will be seeing ST graphics, never suspecting the ST.

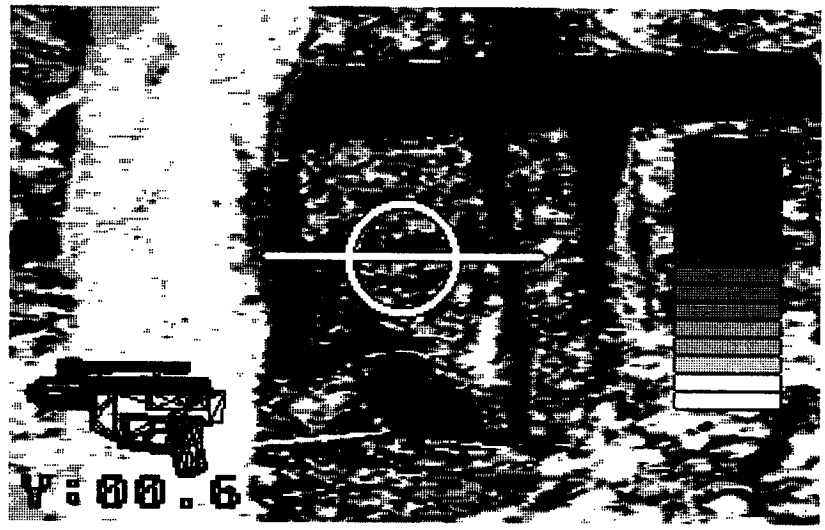
The beginning of every concert was to have, "something like a 20 minute countdown." This is done to tell the crowd when the band will take the stage, and to build tension before the show. I did this by writing a clock program in GFA Basic. The program checks the system clock for one second increments and displays a countdown similar to a digital readout. After the screen is updated, a short beep is heard by using GFA's SOUND command. The countdown looks like what you would see in a movie before a spaceship shuts down or explodes. When this was shown to an audience for the first time at a big elector festival in Germany, the crowd immediately rushed the stage and waited for the band.

Other videos were created on a song-by-song basis. One was "to have the feeling of being chased and



This shows a computer-generated band member used for the song, "Homes and Gardens." This model uses the hands discussed in the article.

hunted." I thought it would be fun to create something like what the Predator might see. A friend and I ran through a wooded area in New Jersey with our video cameras. I took this footage and put it through the Atari using Vidi ST, the frame grabber. By using different palettes, I was able to get some amazing results. The footage was taped immediately from the ST with another VCR, so the ST was really kind of a filter. I played the tape back, and used a video camera to shoot this thermal footage directly off the screen, because the ST doesn't overscan (and I really wish it did). This thermal-vision, now full screen, was superimposed with other ST graphics showing weapons selections and other things. To superimpose, I used a Videonics MX-1 and its chroma key feature. I like chroma keying better than gen-locking because you can key on any color, not just the computer's color 0. Ironically, for this video, I was inspired by screen shots of Jaguar's *Alien vs. Predator*, and it hadn't even been released yet!



An example of what the "Predator–Vision" looks like.

The programs I use mostly are *CAD 3-D*, *CyberSculpt*, *Chronos 3-D* and *CyberPaint*. Tom Hudson's modeling software of the Eighties rivals what is being done today in the Mac and PC world, hands down. And for the price! I was thinking about buying one of the five-thousand dollar Silicon Graphics platforms, but with Alias software, you are suddenly in tens of thousands of dollars. The ST was still looking pretty good.

I usually go into *CyberSculpt* to modify objects started in *CAD 3-D*. I like the ability of selecting a point on an object that's already built, and moving it. Actually, I copied the band's logo this way. I started with one of the *Cad-3D* fonts and used *CyberSculpt* to modify it. I also like the fact that templets can be extruded along a path. I used this feature to build futuristic corridors for the background video of the title track, Homes and Gardens.

I also used *CyberSculpt* to create complicated hands that were shown on a keyboard. Originally, I started in *Cad 3-D*, building one joint at a time, but I realized that there was a better way. In *CyberSculpt*, I shaped fingers that started from the same simple tube, and bent them into different positions. The thumb was created by deleting one of the joints. By the way, in *Cad 3-D*, you can create extruded objects that are symmetrical by using the Spin tool. Select Spin, work on half the templet, and the other half is drawn automatically. Then create the object to have only four faces.

After the models are built, I do my animating in *Chronos*. I like its different rendering options, like the ability to have distant lines drawn darker than lines in the foreground. Most of the animation is created as a loop, such as the logo infinitely turning. This is good for tape editing because there is no crucial "in" and "out" point. I then load the Delta file into *CyberPaint*, where things are touched up. When using 16 colors isn't enough, I use the separate 3-D elements to build a picture in *Spectrum 512* and use one of the utilities to convert it to a PI1. I then use this picture and *CyberPaint's* Fit Color command to get all of the elements on the screen while keeping their color. Finished animation is saved as a *Cyberpaint* SEQ file.

The total time needed for seven different videos and the countdown was about a month and a half. This included all programming, building objects, shooting footage, and editing everything to fit the changing tempos of the songs. I use Practical Solutions' Monitor Master to get a composite signal from the ST. All cables are fed to the MX-1, then directly to a Sony editing deck.

I have been looking at Atari's Falcon and its music and video capabilities. It will be interesting to see if Atari will take advantage of Commodore's unfortunate end. I hope the Falcon is supported by the industry, because people need affordable technology. The Falcon probably could be used for nonlinear editing, that is, if someone would write the software. I hope companies that have written titles for Atari computers will continue to do so. And I hope that this article will inspire you to work around any limitations that you come across. When Haujobb tours in America, come see the show. You would never guess that an ST created their graphics. And hopefully, no one will be surprised to find that out.

An Update on Flopticals

by Richard J. Thieman

Background

In the Dec 92/Jan 93 issue of *Current Notes*, David C. Troy wrote an article in his column, "Atari Myths and Mysteries," called Flopticals are to Horses....

Anyone reading *CN* who skips Dave's column has missed an awful lot of interesting information about Atari computers and the computing world in general. Dave not only has a wealth of knowledge, but has the ability to write about technical subjects in a manner that conveys understanding to lunkheads like myself. For those who haven't read about flopticals, or don't have the Dec 92/Jan 93 issue, the following borrows heavily from that column.

Flopticals

The technology referred to is the Insite Peripherals 21MG floptical drive. The drive mechanism is quite small, a one inch high floppy-type drive the same size that PC 1.44 meg drives are these days. It is a 3.5" floppy drive mechanism that supports three formats: 720K, 1.44MB, and 21MB (21MB? - Keep reading).

The read-write process is the same as on a standard floppy drive. A current is applied to a magnetic read/write head to create a magnetic field which causes the particles on the disk medium to realign themselves to complement the magnetic field. For reading, the magnetic field created in the particles induces a current in the drive head and so you can reproduce the signal you recorded in the write process. The head is moved by a "stepper motor" across the 80 concentric tracks per side of a standard PC formatted disk rotating at 300 RPM. Two heads are needed for a double-sided disk. Data is transferred through the head to the disk at 250K bits per second on a standard double density disk drive. The floppy disk guru has declared that there will be 512 bytes per sector so this works out to 9 sectors per track and 360 K per side. (See Dave's M&M in CN Jan/Feb 1992 issue).

In a high density drive, the data transfer rate is doubled. This doubles the sectors per track because each sector can contain only 512 bytes and neither the RPMs of the disk drive have nor the number of tracks per side have changed. A higher quality floppy disk is needed to insure that there are enough magnetic storage particles to get magnetized, since data bits are being stored twice as dense.

Atari's disk controller chip (Western Digital 1772) could not handle the doubled data transfer rate needed for HD, which is why all STs, STEs and older MSTEs/TTs only have 720K double density floppy drives. A new chip was developed, called the "AJAX," and is available in kit form for $149 to convert the MSTEs and TTs to high density floppy drives. There have been methods advertised to convert the older STs and STEs to HD floppy drives, but they are more expensive and way past anything that I would try myself.

So, how does the Insite floptical store 21MB in the same space as a standard HD 1.44MB? The drive uses a laser to optically track the head position within an extremely tight tolerance. On floptical disks, a special laser track is embedded between each physical track on the disk. The laser is aligned to the track and uses a feedback-loop mechanism to insure that it remains aligned. In this respect, the drive is optical. With the help of the optical alignment tracks, over 700 magnetic tracks and 35 sectors per track can be crammed onto one disk the size of a standard High Density (HD) floppy disk. The laser track is not something that is used for storage and the drive cannot modify the laser track. The floptical disks have a super dense magnetic media and must be purchased with the laser track installed to be of any benefit to the floptical drive user. They cost around $21 per disk or about $1.00 per megabyte.

Removable Media Hard Drive

The Insite floptical has an embedded SCSI controller and can be used on Atari STs with any of the ICD's host adapters. It is a natural for use with ICD's Link and even better with Link 2. Link 2 has a LED to indicate that it is receiving power and now has support for parity, so that it is no longer necessary to disable parity on the drive. The floptical cannot be used as a true floppy drive. It must be stuck on the DMA chain. (SCSI chain on the TTs and Falcons). When compared with removable hard drives, like the Syquests, it is slow (transfer speed of about 95K per second and an access time of about 135ms.) ICD's Link 2 software now allows the floptical to auto boot. See figure. The drive can be formatted as standard with data interchangeability with PCs or Macintosh or formatted as Atari only. When formatted as Atari only, the floptical will work with all TOS versions and

can be made to auto boot. The auto boot function has never worked for me on the first try. The computer needed to be rebooted once before the floptical would begin the boot cycle. Putting ICD's coldboot.prg in the auto folder of drive A solved that problem. The floptical will definitely work with TOS 1.0 / 1.2 as long as all floppy media are formatted with ICD's program. However, when attempting to read and transfer files from a PC formatted 1.44MB disk, the directory was read intact and the first files would transfer OK. If the floppy disk was much over half full, the last couple of files in the directory could not be read completely and after TOS 1.0 indicated that they had been copied to drive A, the file names would appear on drive A but there would be 0 bytes in the file. I had been working with an old 1040STF, which, for some reason, I thought it was cool to keep with TOS 1.0.

After reflecting on why for at least ten minutes, I could not think of a single program that I still used that needed TOS 1.0. *Spectrum* runs just fine on TOS 1.4. Upgrading that old 1040STF to TOS 1.4 completely eliminated any problem with reading or transferring files from a PC 1.44MB HD disk.

Bottom Line

The floptical has just about died in the PC world. All IBM compatibles made in the last five years have the 1.44MB HD floppy. There are many storage options available like the new Syquest 105 or 270, Bernoulli drives and writable optical media. Storage capacities have multiplied. (Try finding a new hard drive listed in Computer Shopper under 170 MB). There may be a small niche in the Atari world for older ST users like me who want the HD 1.44MB capability and a backup removable storage of 21MB at a reasonable price. I have heard that Insite has stopped manufacturing the flopticals. Maybe one of our Atari dealers can get a deal on a closeout and sell a complete system for, say, $250. One was just listed in a local trading magazine by a Mac owner for $275 with ten floptical disks. I was able to get one for under $150. Good Hunting!

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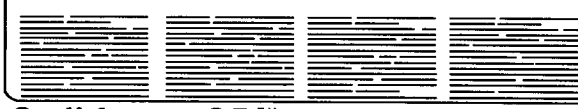

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Cannon Fodder

Strategy, Tactics, and a Bit of Humor

Review by Andreas Barbiero

[Requirements: Atari ST/STe. Floppy Drive, Mouse. Available from Sensible Software/Virgin games.]

Sensible software has been responsible for past Atari game hits like *Mega-lo-Mania*, and after a dry spell they have returned with *Cannon Fodder*. This game attempts to deliver small unit tactics simulation with a cartoonish interface. Instead of trying to give a first person state-of-the-art perspective, the gameplay is displayed from an overhead view with a definitely less than realistic but, nonetheless, macabre representation of mayhem and death. This does not belittle the game, but shows that the programmers are trying to work within the hardware, and provide honest gameplay instead of visual splash. The game intros with a few digitized photos of the programmers in militaria and what sounds like a 12kHz sample of a slightly humorous song concerning war . . . not bad since it is off a floppy disk.

Floppysaurus

The game is played solely off of floppies, and the usual wait and thumb twiddling that goes on with floppy drive access is present; not only is the initial load a wait, but the waiting between scenarios can get on your nerves. You can use both floppy drives, as well as save games to a floppy disk. I could not get the game to format a SAVE GAME correctly on my MegaSTe, either from within the internal format and save utility or on a pre-formatted disk. I have heard of people who have successfully saved games, so maybe this is just a problem with the MegaSTe.

The manual is short, easy to read, and contains the information that you need to get started with this game. Combat scenarios are split into parts, and waiting for the intermission between these parts can be tiresome. The game does not run on my TT030, and I have not checked it against a Falcon030. While I consider the lack of hard drive support to be serious, the game itself, while unassuming, is generally very good.

Let the Battle Begin

Control of your little party of men is through the mouse. Not only do you formulate plans, but you have to direct them everywhere that they need to go, and command them when and where to fire. With the mouse pointer as an arrow, point to a spot and click, they will dutifully follow like ducks in a row. Click on the right button and the arrow turns into a crosshair, and by clicking again on the right button a stream of bullets will reach towards the spot you designate. Hold the right button and click on the left and a grenade or bazooka rocket will fire at the crosshairs. Vehicles pop up on different levels, and when you place the mouse cursor over a vehicle, you can command men to get in or out of a Jeep, Tank, Choppa, (their spelling, not mine!) or Skidoo (snow jeep.) These vehicles can be used by the enemy. They are easily distinguished by a flashing light so you won't head towards an enemy unwarned!

You have a limited number of men lined up to draw from, and as each of your little soldiers die, pitifully writhing, you will have to draw new recruits from this pool. The sadist in you can be satiated by shooting your enemies repeatedly; they will jump around with each shot like a rabbit in a hot pan. It may be nice way to get back at a soldier who killed a few of your men, but not something that you would want to admit to at a PTA meeting. Successfully guiding your men through a combat mission results in joyously leaping soldiers (or single soldier if you are an unlucky leader) and promotions for the survivors. As your troopers survive battles and get promoted, you will be rewarded with an increased firing range. High ranking soldiers will give you the edge in a battle where you are going head to head with a bazooka armed enemy and there is no intervening foliage to provide cover. The image of your men trudging over land and dog-paddling through rivers and lakes is also humorous, but the fatal results of tactical failure bring home the fact that this IS a wargame, and as the manual states ". . . war is not a game--war, as *Cannon Fodder* demonstrates in its own quirky little way, is a senseless waste of human resources and lives." Too true, but for the scope of the game, having to run off of floppies is a senseless waste of the users' time.

Jungle, desert, arctic wastes, moors, and even an underground complex are the terrains that you will have to tromp over to meet and destroy the enemy. As in nature, there are unique features to each type of terrain. Trees, quicksand, igloos, hangars and sewers are just a few of the things that you will encounter. (and, consequently, get to blow up!) Assorted gre-

nades, missiles, and rockets are available in small caches, usually near enemy buildings, and you need to "tag" them to add them to your inventory. You can distribute these weapons when you split your group into smaller groups, but before you tag them, be sure not to shoot them, as a rather nasty explosion will take place.

These weapons are the only way to destroy sites like buildings and enemy vehicles, so locating these caches is your first priority. The enemy is not to be trifled with. Bearing bazookas and machine guns, your opponents can quickly kill your little party with disheartening regularity.

The game progresses from the distinctly easy to the complicated. There is a learning curve, but from the first mission to the last, it gives you time to learn the mechanics of maneuvering your platoon successfully so that you have a fighting chance. You can scroll the screen vertically to get a glimpse of the dangers that may lie there, but there is no horizontal scroll. Instead, the screen seems to flit ahead to show you what lies in the direction you are heading, but only if there is something there to see. An overall map is accessible at all times from the playing field, and just like in real combat, knowing the lay of the land is important if you expect to win.

Cease Fire!

The combination of weapons and missions makes for a game that does not get boring quickly. I have been playing it for over a week now, and I still enjoy playing the beginning levels as well as conquering the higher missions. The missions are all combinations of basic themes. You may be tasked with the job of killing all the enemy, destroying their buildings, rescuing prisoners or capturing an enemy leader. The combinations of these missions, with the different vehicles and terrain types in the game, keep the gameplay from getting old or repetitive. All that this game needs to be a complete winner is for it to be installable on a hard drive, and TT030 compatibility. There may be only a few TT030s out there that are used for gaming, but TT compatibility will bring this program closer to running on future TOS machines, and consequently will increase the program's life. If you are looking for a game to play that employs strategy, tactics and a bit of humor, than you cannot go wrong with this one. Virgin games has a winner on its hands.

This review could not have been possible without the generosity of Kent at Systems for Tomorrow. Thank you for the loan of this software! To order this game, call Kent at 1-800-875-4943 or call 1-816-353- 1221 for info on other Atari products!

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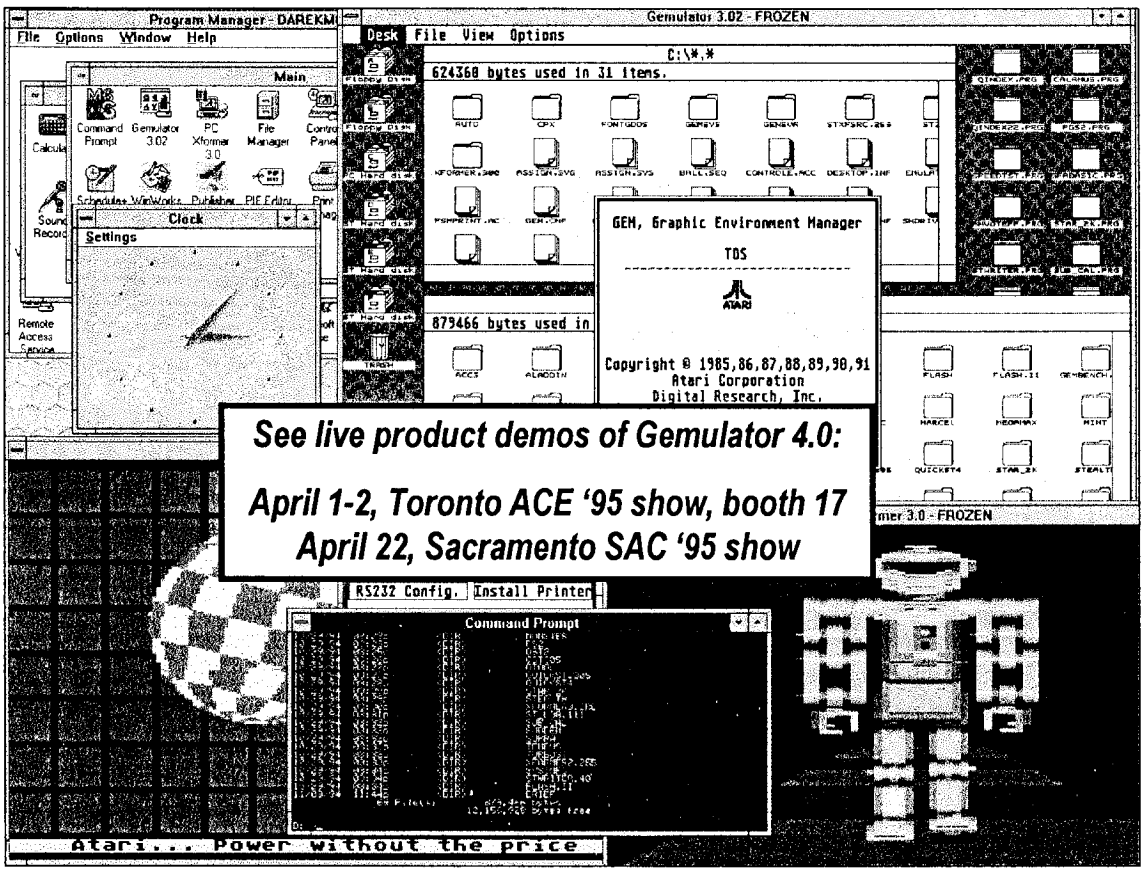

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- requires a 486 or Pentium with MS-DOS, VGA, and 640K of RAM
- price: **$29.95** U.S.

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